FLORA LONDINENSIS;

OR,

PLATES AND DESCRIPTIONS

OF SUCH

PLANTS

AS GROW WILD

IN THE

ENVIRONS OF LONDON:

WITH THEIR

PLACES OF GROWTH AND TIMES OF FLOWERING,

THEIR

Several NAMES, according to LINNÆUS, and other Authors:

WITH A PARTICULAR DESCRIPTION OF EACH

PLANT

IN LATIN AND ENGLISH.

TO WHICH ARE ADDED,

THEIR SEVERAL USES,

IN MEDICINE, AGRICULTURE, RURAL ŒCONOMY, AND OTHER ARTS.

BY WILLIAM CURTIS.

VOL. II.

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1798.

TO

JOHN COAKLEY LETTSOM, M.D.

THE FRIEND OF HUMANITY,

THE PATRON OF SCIENCE,

THIS SECOND VOLUME

OF THE

FLORA LONDINENSIS,

IS MOST RESPECTFULLY

INSCRIBED,

BY

HIS MUCH OBLIGED FRIEND,

WILLIAM CURTIS.

GENERAL OBSERVATIONS

ON THE

Advantage which may reſult from the Introduction of the SEEDS of our beſt GRASSES.

THAT much of our meadow and paſture land may be rendered infinitely more valuable than it is at preſent, by the introduction of ſome of our beſt graſſes, is an opinion which has long prevailed among many of the more enlightened agriculturiſts of the preſent age. And while ſome of theſe have endeavoured to excite the huſbandman to collect and cultivate ſeeds of this ſort, by writings fraught with the ſoundeſt reaſoning[a]; others have attempted to attract him by the offers of well-directed premiums[b]. But, hitherto, neither the writings of the one, however convincing, nor the premiums of the other, however alluring, have been productive of the deſired effect: Ray-Graſs ſtill continues to be the only graſs whoſe ſeeds can be purchaſed for the purpoſe of laying down meadow and paſture land; and how inadequate that graſs is for ſuch a purpoſe, is known to every intelligent farmer. Why indeed the *Lolium perenne*[c] ſhould originally have been made uſe of, in preference to all the other graſſes, cannot, perhaps, be ſatisfactorily accounted for; moſt probably it owes its introduction to accident, or to its being a common graſs whoſe ſeeds were eaſily collected, rather than to its being preferred from an inveſtigation of its merits compared with the others; however this may be, there appears to be no reaſon for excluding the others, for it would appear exceedingly improbable that of upwards of a hundred graſſes[d] growing wild in this country, the Author of Nature ſhould have created one only as ſuitable to be cultivated for paſturage or fodder.

Taking it for granted then, that there are other graſſes, ſuperior in many reſpects to the Rye-Graſs, this queſtion naturally ariſes:—How comes it that they have not found their way into general uſe? To this it may be anſwered; improvements in any ſcience, but more eſpecially agriculture, are ſlow in their advances; and, perhaps, no claſs of men adheres more pertinaciouſly to old practices than the farmer.

The difficulty of diſtinguiſhing the graſſes one from another, has no doubt proved one grand obſtacle; many of theſe plants are ſo much alike, that the moſt diſcerning botaniſt is often at a loſs to know ſome of them apart; if ſo, how eaſily may the huſbandman be deterred from the arduous taſk.

There is another cauſe which may have operated againſt their introduction: graſſes, as well as other plants, have been frequently recommended, from a partial and limited obſervation of them, by perſons who neither knew them well as botaniſts or agriculturiſts, or who have recommended them, merely to gain by the credulity of the public.

But, perhaps, the chief reaſon has been, that perſons who might be expected to make the improvements, have not had the means fairly put into their hands of making the experiment. Whether the method we have adopted on this occaſion, may be more ſucceſsful than thoſe of our predeceſſors, muſt be determined by the event. From the numerous applications made to me, by a variety of gentlemen, for graſs ſeeds, it has appeared incumbent on me to do ſomething which might gratify them, and render the public an eſſential ſervice; I wiſh, at leaſt, to put it into their power to decide on a matter which has been long agitated, and from which I am far from being the only one that entertains the moſt ſanguine hopes of its proving a great national advantage.

The graſſes recommended will I am certain, do all that *our natural graſſes* can do: they are ſix of thoſe which conſtitute the bulk of our beſt paſtures; moſt of them are early, all of them are productive, and they are adapted to ſuch ſoils and ſituations as are proper for meadows and paſtures.

But let no one expect them to perform wonders; for, after all, they are but graſſes, and, as ſuch, are liable to produce great or ſmall crops, according to particular ſeaſons, or to the fertility or barrenneſs of the ſoil on which they are ſown.

OBSERVATIONS on the GRASSES recommended and contained in the PACKET.

I. ANTHOXANTHUM ODORATUM. *Sweet-Scented Vernal-Graſs.* *Fig.* 1.

NEXT to the *Cynoſurus Cæruleus*, or *Blue Dogs-Tail Graſs*, this, of all our Engliſh graſſes, comes firſt into bloſſom; it is therefore valuable as an early graſs; it is valuable alſo for its readineſs to grow in all kinds of ſoil and ſituation, being found in bogs, in woods (eſpecially ſuch as are of low growth, or have had the underwood cut down) in rich meadows, and in dry paſtures; in point of crop, it is not ſo productive as ſome, yet more ſo than others; cattle appear to be fond of it, and it is well known to be the only Engliſh graſs which is odoriferous; the agreeable ſcent of new-made hay ariſes entirely from this graſs, hence its name of *odoratum*, or ſweet-ſcented; the green leaves, when bruiſed, readily impart this perfume to the fingers, by which means the foliage may at all times be known; and perſons not deeply ſkilled in Botany, may diſtinguiſh it when in bloſſom, by its having only two threads or ſtamina to each flower.

Of the ſeveral graſſes here recommended, it is the leaſt productive in point of ſeed.

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[a] "It is wonderful to ſee how long mankind has neglected to make a proper advantage of plants of ſuch importance, and which, in almoſt every country, "are the chief food of cattle. The farmer, for want of diſtinguiſhing and ſelecting graſſes for ſeed, fills his paſtures either with weeds, or bad or improper "graſſes; when, by making a right choice, after ſome trials, he might be ſure of the beſt graſs, and in the greateſt abundance that his land admits of. At "preſent, if a farmer wants to lay down his land to graſs, what does he do? He either takes his ſeeds indiſcriminately from his own foul hay-rick, or ſends to "his next neighbour for a ſupply. By this means, beſides a certain mixture of all ſorts of rubbiſh, which muſt neceſſarily happen: if he chances to have a large "proportion of good ſeeds, it is not unlikely but that, what he intends for dry land may come from moiſt, where it grew naturally, and the contrary. This "is ſuch a ſlovenly method of proceeding, as one would think could not poſſibly prevail univerſally; yet this is the caſe as to all graſſes, except the Ray-Graſs, "and what is known in ſome few counties by the name of the Suffolk-Graſs (Poa annua); and this latter inſtance is owing, I believe, more to the ſoil, than "any care of the huſbandman. Now, would the farmer be at the pains of ſeparating, once in his life, half a pint or a pint of the different kinds of graſs "ſeeds, and take care to ſow them ſeparately; in a very little time, he would have wherewithal to ſtock his farm properly according to the nature of each ſoil; "and might, at the ſame time, ſpread theſe ſeeds ſeparately over the nation, by ſupplying the ſeed-ſhops. The number of graſſes fit for the farmer is, I believe, "ſmall; perhaps, half a dozen, or half a ſcore, are all he need to cultivate; and how ſmall the trouble would be of ſuch a talk, and how great the benefit, "muſt be obvious to every one at firſt ſight. Would not any one be looked on as wild, who ſhould ſow wheat, barley, oats, rye, peaſe, beans, vetches, "buck-wheat, turnips, and weeds of all ſorts, together? Yet, how is it much leſs abſurd, to do what is equivalent, in relation to graſſes." *Stillingfleet's Miſc. Traſts, Edit.* 2. *p.* 365.

"Meadow and paſture land is oftener neglected than ploughed ground, notwithſtanding it generally admits of a much greater proportion of improvement. "The beſt graſſes cannot be collected at too great an expence; for, I have ſeen a ſmall ſpot of land, in the middle of a large piece, which was laid down "twelve or fourteen years ſince, by Mr. Stillingfleet, upon the eſtate of Mr. Price, of Foxley, in Herefordſhire, with ſome choice ſeeds, at the ſame time when "the remainder of the field was laid down with common ſeeds; and this ſpot is conſiderably better than the reſt. It not only appeared ſo to my judgment, "but was allowed to be ſo by Mr. Price's bailiff, who was well acquainted with its produce.

"From Mr. Stillingfleet's experiments, and my own obſervations, I am clearly of opinion, that any perſon who has land calculated for graſs, may improve "it, by this method of laying it down, to a much greater degree than he can in the uſual way." *Kent's Hints to Gentlemen of Landed Property.* See alſo, *Anderſon's Eſſays on Agriculture and Rural Affairs*, 2 *vols.* 8*vo.* in which this ſubject, among a variety of others, is very copiouſly and ably handled; and, on the peruſal of which, one cannot but ſeriouſly lament, that many of the uſeful hints of the ingenious author, are rendered abortive, from his want of Botanical information.

[b] Society for the Encouragement of Manufactures, Arts, and Commerce.—[c] Ray, or Rye-Graſs.—[d] The word graſſes is here underſtood in its ſtrict ſenſe.

II. Alopecurus Pratensis. *Meadow Fox-Tail Graſs.* *Fig.* 2.

PRODUCES its ſpike almoſt, and in ſome ſituations to the full, as early as the *Anthoxanthum*; hence it is equally valuable as an early graſs; and as it is much larger, and quicker in its growth, it is conſequently much more productive: it ſhoots very rapidly after mowing, producing a very plentiful aftermath; and where land is rich, and two crops are not thought too much for it to bear, of all our Engliſh graſſes this appears to be the beſt adapted to ſuch a purpoſe, and ought to form a principal part of the crop: its foliage may, perhaps, appear coarſe to ſome, but it ſhould be remembered, that no Engliſh graſs can be productive that is not in ſome degree coarſe; but if mown early, juſt as it comes into bloom, though the leaves are large the hay will not be coarſe; in general, the great advantage ariſing from the earlineſs of this and the preceding graſs is entirely loſt at a diſtance from London, where hay-making commences late, and where the huſbandman ſeems to wait for a crop of general indiſcriminate herbage, rather than of graſs.

The *Meadow Fox-Tail* is more confined as to its place of growth, growing naturally in a moiſt ſoil only: hence it is beſt adapted to improve very wet ground that may be drained of its ſuperfluous moiſture, or to form or meliorate meadows that have a moiſt bottom, and are not apt to be burnt up in dry ſummers.

Its ſeeds are eaſily collected, but a great number of them, we believe, at leaſt one-third, are yearly deſtroyed by a very minute orange-coloured larva or maggot, which feeds on the embryo of the ſeed, and produces a very ſmall muſca or fly, probably the *Muſca Frit* of Linnæus.

This graſs is diſtinguiſhed, in ſome degree, by the largeneſs of its foliage, and by its producing a ſoft ſpike on a long ſtalk early in May. The *Meadow Cats-Tail Graſs* produces a ſpike ſomewhat ſimilar, but rougher to the touch, and much later in the ſummer.

III. Poa Pratensis. *Smooth-Stalked Meadow-Graſs.* *Fig.* 3.

THE foliage of this graſs begins to ſhoot, and to aſſume a beautiful verdure very early in the ſpring, but its flowering ſtems are not produced ſo ſoon, by at leaſt a week, as thoſe of the *Alopecurus*; this trifling difference, however, in point of earlineſs of flowering, does not prevent it from ranking very properly with the two preceding; and, where early graſſy paſturage is a deſideratum, we are of opinion it cannot better be obtained than by a combination of theſe three; if crop be at the ſame time an object, the *Meadow Fox-Tail Graſs* ſhould predominate.

This graſs rather affects a dry than a moiſt ſituation, and hence it keeps its verdure in long-continued dry weather better than moſt others, but it will thrive in either; will grow on the top of a dry wall, but grow much more luxuriantly in a rich meadow: it is to be obſerved, however, that it has a root which creeps like the *Couch-Graſs*, and is almoſt as difficult to extirpate; it ought therefore to be cautiouſly introduced where the paſturage is not intended to be permanent.

Of the trifling improvements which we flatter ourſelves to have occaſionally made in ſome of the ſpecific characters of the Engliſh plants, none have given us more ſatisfaction than thoſe which relate to this ſpecies and the *Poa Trivialis*, two graſſes ſo very ſimilar, as ſcarcely to be diſtinguiſhed, even by the moſt diſcerning eye, at a little diſtance, and very obſcurely characteriſed by Linnæus, but which, by attending to two characters only in each graſs, may now, in a moment, be diſtinguiſhed by the utmoſt facility and certainty.

The *Poa Pratenſis* has a ſmooth ſtalk, the *Trivialis* a rough one, perceptible when drawn betwixt the thumb and finger, and which ariſes from little ſharp points, viſible when the ſheath of the leaf which covers the ſtalk is magnified, *vid. fig.* 4. the *Trivialis* has a long pointed membrane at the baſe of the leaf, *fig.* 5, the *Pratenſis* a ſhort blunt one, *fig.* 6. Theſe graſſes differ ſpecifically in a variety of other particulars, not neceſſary here to dwell on; and which ſuch as wiſh to be more particularly informed of, may conſult the Flora Londinenſis.

IV. Poa Trivialis. *Rough-Stalked Meadow-Graſs.* *Fig.* 7.

SIMILAR as this graſs and the preceding are in their appearance, particularly in their mode of flowering, they differ very eſſentially in their qualities. While the *Smooth-Stalked Meadow-Graſs* is found chiefly in dry paſtures, the *Rough-Stalked* principally occurs in moiſt meadows, or on the edges of wet ditches; it loves moiſture, and a ſituation that is rather ſhady: hence, though there are few graſſes more productive, or better adapted, for hay or paſturage, it is a tender graſs, and liable to be injured by ſevere cold, or exceſſive drought: in very wet ground near the Thames, we have obſerved it grow very tall, while in poor land we have, on the contrary, ſeen it altogether as diminutive; it is, perhaps, no ſmall recommendation to it that it is a principal graſs in that uncommonly productive meadow near Saliſbury, mentioned by Stillingfleet, and more particularly deſcribed in the Memoirs of the Bath Agricultural Society, *vol.* 1. *p.* 94.

The account given of the extraordinary fertility of this meadow, excited our curioſity, and induced us to requeſt a gentleman reſiding near the ſpot, to favour us with ſix ſmall turfs, cut up in different parts of the ſaid meadow, and which being planted in our garden, Lambeth-Marſh, produced as follows:

Turf 1.	Poa trivialis, Ranunculus acris, Triticum repens, Agroſtis alba.	Turf 4.	Poa trivialis, Triticum repens, Peucedanum Silaus.
Turf 2.	Poa trivialis, Alopecurus pratenſis, Triticum repens.	Turf 5.	Poa trivialis, Alopecurus pratenſis, Agroſtis alba, Avena elatior, Triticum repens.
Turf 3.	Poa trivialis, Agroſtis alba.		

This experiment proves, in a great degree at leaſt, what we long before ſuſpected, that the extraordinary fertility of this meadow aroſe not from any new graſs peculiar to it, but from ſeveral unuſual circumſtances concurring, and favouring, in an uncommon degree, the growth of certain well known graſſes, eſpecially the *Poa trivialis* and *Agroſtis alba*.

We may remark that the ſeeds of the *Poa Trivialis* and *Poa Pratenſis*, but more eſpecially thoſe of the former, are apt to be entangled and adhere to each other, as if cobwebs had been intermixed with them.

V. Festuca Pratensis. *Meadow Feſcue-Graſs.* *Fig.* 8.

OF the ſeveral graſſes here recommended, this comes the neareſt in its appearance to the Ray-Graſs, to which, however, it ſeems to us, in many reſpects, to be greatly ſuperior, at leaſt, for the purpoſe of forming or improving meadows; it is larger, and more productive of foliage; it is ſtrictly perennial, it is very hardy, and will thrive not only in very wet, but alſo in dry ground: we have found it growing in all ſituations, from the ſand-pits at Charlton to the oſier-grounds at Batterſea; and it abounds in the very beſt meadows about London; in ſhort, we know of no graſs more likely to ſupply the deficiencies complained of in Ray-Graſs; and yet it has not, that we know of, been particularly recommended. One quality it has, which bids fair to introduce it quickly into more general uſe; it produces more ſeeds than any of the others, which are eaſily gathered, and readily grow. In one reſpect, it is inferior to the three firſt graſſes; it does not produce its flowering ſtems earlier than about the middle of June, a fortnight or three weeks later than the *Meadow Fox-Tail Graſs*, yet it cannot be conſidered as a late graſs, as moſt of the Agroſtis tribe, and the *Meadow Cats-Tail Graſs*, flower at leaſt three weeks later. It muſt be carefully diſtinguiſhed from the *Feſtuca Elatior* or *Tall Feſcue-Graſs*, which is a very ſimilar but much coarſer graſs.

VI. Cynosurus

VI. Cynosurus Cristatus. *Crested Dogs-Tail Grass.* Fig. 9.

IT is chiefly from the great character which this grass bears as a favourite and wholesome food for sheep, and from its being found in our soundest and best pastures, that it is here recommended. It grows naturally in dry situations, and will not thrive in meadows that are very wet: it flowers about the same time as the *Meadow Fescue-Grass*, and is not very productive of foliage. As its flowering stems are always left untouched by cattle, its seeds may easily be collected, where the pasturage is fed, not mown.

Of the above SIX GRASSES, it will appear that the

Meadow Fox-Tail, and Rough-Stalked Meadow-Grass	are fittest for	Moist Land.
Meadow Fescue, and Sweet-Scented Vernal	are fittest for	Land either moist or moderately dry.
Smooth-Stalked Meadow-Grass, and Crested Dogs-Tail	are fittest for	Dry pasture.

The ORDER of their FLOWERING.

1. Sweet-Scented Vernal.
2. Meadow Fox-Tail.
3. Smooth-Stalked Meadow.
4. Rough-Stalked Meadow.
5. Meadow Fescue.
6. Crested Dogs-Tail.

We could easily add many more grasses to this list, and those too which, perhaps, may be highly deserving of it; but we have our doubts, whether, by recommending more, we might not increase the difficulty of introducing grass seeds without any adequate advantage.

We shall, however, just take the liberty to mention such other English grasses, as appear to us, from long and repeated observation, deserving of further notice, and these are

Avena Elatior, Tall Oat Grass: Common in wet meadows, and by the sides of hedges, early, and very productive, but coarse.

Avena Flavescens, Yellow Oat-Grass: Affects a dry soil, is early, and productive; bids fair to make a good sheep-pasture.

Avena Pubescens, Rough Oat-Grass: Soil and situation nearly similar to that of the *Meadow Fescue*, hardy, early, and productive.

Bromus Erectus, Upright Brome Grass: Peculiar to chalky soils, early and productive; promises to be a good grass for chalky lands, and thrives indeed very well on others.

Cynosurus Caracus, Bad Dogs-Tail Grass: Earliest of all the grasses, grows naturally on the tops of the highest lime-stone rocks in the northern parts of Great-Britain; not very productive, yet may, perhaps, answer in certain situations, especially as a grass for sheep; bears the drought of summer remarkably well: at all events, seems more likely to answer than the *Sheeps Fescue Grass*, on which such encomiums have most unjustly been lavished.

Dactylis Glomeratus, Rough Cocks-Foot Grass: A rough coarse grass, but extremely hardy and productive; soil and situation the same as the *Meadow Fescue*.

Festuca Elatior, Tall Fescue Grass: Tall and coarse, but very productive; affects wet situations.

Festuca Duriuscula, Hard Fescue Grass: Affects such situations as the *Smooth-Stalked Meadow-Grass;* is early, and tolerably productive; its foliage is fine, and of a beautiful green; hence, we have sometimes thought it was, of all others, the fittest for a grass-plat or bowling-green; but we have found, that though it thrives very much when first sown or planted, it is apt to become thin, and die away, after a while.

Phleum Pratense, Meadow Cats-Tail Grass: Affects wet situations, is very productive, but coarse and late.

Directions for Sowing the GRASS SEEDS contained in the Packet.

IF a piece of ground can be had, that is neither very moist nor very dry, it will answer for all the seeds; they may then be sown on one spot: but if such a piece cannot be obtained, they must be sown on separate spots, according to their respective qualities, no matter whether in a garden, a nursery, or a field, provided it be well secured and clean. Dig up the ground, level, and rake it, then sow each kind of seed thinly in a separate row, each row about a foot apart, and cover them over lightly with the earth: the latter end of August, or beginning of September, will be the most proper time for this business. If the weather be not uncommonly dry, the seeds will quickly vegetate, and the only attention they will require will be to be carefully weeded: in about a fortnight from their coming up, such of the plants as grow thickly together may be thined, and those which are taken up transplanted, so as to make more rows of the same grass.

If the winter should be very severe, though natives, as seedlings, they may receive injury, therefore it will not be amiss to protect them with mats, fern, or by some other contrivance.

Advantage should be taken of the first dry weather in the spring, to roll or tread them down, in order to soften their roots in the earth, which the frost generally loosens: care must still be taken to keep them perfectly clear from weeds. As the spring advances, many of them will throw up their flowering stems, and some of them will continue to do so all the summer. As the seed in each spike or panicle ripens, it must be very carefully gathered, and sown in the autumn, at which time the roots of the original plants, which will now bear separating, should be divided and transplanted, so as to form more rows; the roots of the *Smooth-Stalked Meadow-Grass*, in particular, creeping like *Couch-Grass*, may readily be increased in this way; and thus, by degrees, a large plantation of these grasses may be formed, and much seed collected.

While the seeds are thus increasing, the piece or pieces of ground which are intended to be laid down, should be got in order. If very foul, perhaps, the best practice (if pasture land) will be to pare off the sward and burn it on the ground; or, if this should not be thought advisable, it will be proper to plough up the ground and harrow it repeatedly, burning the roots of *Couch-Grass*, and other noxious plants, till the ground is become tolerably clean; to render it perfectly so, some cleansing crop, as potatoes or turnips, should be planted or sown.

By this means, the ground we propose laying down, will be got into excellent order without much loss; and being now ready to form into a meadow or pasture, should be sown broad-cast, with the following composition.

Meadow Fox-Tail, one pint.—*Meadow Fescue*, ditto.—*Smooth-Stalked Meadow*, half a pint.—*Rough Stalked Meadow*, ditto.—*Crested Dogs-Tail*, a quarter of a pint.—*Sweet-Scented Vernal*, ditto.—*Dutch Clover (Trifolium Repens)* half a pint.—*Wild Red Clover (Trifolium Pratense)* or, in its stead, *Broad Clover of the Slops*, ditto.——For wet land, the *Crested Dog-Tail*, and *Smooth-Stalked Meadow*, may be omitted, especially the former.

Such a composition as this, sown in the proportion of about three bushels to an acre, on a suitable soil, in a favourable situation, will, I am bold to assert, form in two years a most excellent meadow; and as all the plants sown, are strong, hardy perennials, they will not easily suffer their places to be usurped by any noxious plants, which by manure or other means, in spite of all our endeavours, will be apt to insinuate themselves; if they should, they must be carefully extirpated, for such a meadow is deserving of the greatest attention; but if that attention cannot be bestowed on it, and, in process of time, weeds should predominate over the crop originally sown, the whole should be ploughed up, and fresh sown with the same seeds, or with a better composition, if such shall be discovered; for I have no doubt but, at some future time, it will be as common to sow a meadow with a composition somewhat like this, as it now is to sow a field of wheat or barley.

An ENUMERATION of the BRITISH GRASSES.

GENUS I.

AGROSTIS. BENT-GRASS.

1 Spicaventi. *L.* 110. *H.* 30. *R.* 405. *n.* 1. — * Bearded.
2 Canina. *L.* 110. *H.* 30. — * Brown.
3 Tenuifolia. *H. var. canina.* α — * Fine-Leaved. Sheeps-Fescue-Leaved.
4 Setacea. *H. var. canina.* γ
5 Alba. *L.* 111. *H.* α. *polymorpha.* ξ — * Marsh.
6 Capillaris. *L.* 111. *H.* α. *Polymorpha.* α — * Fine-Panicled. Small.
7 Minima. *L.* 111. *H.* 32. *R. Indica, pl. dub.*

GENUS II.

AIRA. HAIR-GRASS.

1 Aquatica. *L.* 112. *H.* 33. *R.* 402. *n.* 3. *Fl. Lond.* — * Water.
2 Cæspitosa. *L.* 112. *H.* 34. *R.* 403. *n.* 5. — * Tufty.
3 Flexuosa. *L.* 112. *H.* 34. *R.* 407. *n.* 8. — * Hearth. Mountain.
4 Montana. *L.* 112. *H.* 35. — * Grey.
5 Canescens. *L.* 112. *H.* 36. *R.* 405. 16. — * Early.
6 Præcox. *L.* 112. *H.* 36. *R.* 408. 10. *t.* 22. *f.* 2. *Fl. Lond.* — * Silver.
7 Caryophyllea. *L.* 112. *H.* 36. *R.* 407. 7.

GENUS III.

ALOPECURUS. FOX-TAIL-GRASS.

1 Pratensis. *L.* 108. *H.* 27. *R.* 396. 1. *Fl. Lond.* — * Meadow.
2 Agrestis. *L.* 108. *H.* 27. *R.* 397. 1. *Fl. Lond.* — * Field.
3 Geniculatus. *L.* 108. *H.* 27. *R.* 396. 2. *Fl. Lond.* — * Flote.
4 Bulbosus. *L.* 108. *H. var. geniculatus* β. *R.* 397. 3. *t.* 20. *f.* 2. — * Bulbous.
5 Monspeliensis *L.* 109. *H.* 28. *Al. aristatus. R.* 396. 4. — * Bearded.

GENUS IV.

ANTHOXANTHUM. VERNAL-GRASS.

1 Odoratum. *L.* 73. *H.* 11. *R.* 398. *Fl. Lond.* — * Sweet-Scented.

GENUS V.

ARUNDO. REED-GRASS.

1 Phragmites. *L.* 123. *H.* 53. *R.* 401. 1. — * Common.
2 Calamagrostis. *L.* 123. *H.* 54. *R.* 401. 2. — * Wood.
3 Epigejos. *L.* 123. ? *H.* 54. *R.* 401. 3. — * Small.
4 Arenaria. *L.* 123. *H.* 54. *R.* 393. 1. — * Sea.

GENUS VI.

AVENA. OAT-GRASS.

1 Elatior. *L.* 121. *H.* 53. *R.* 406. 3. 4. *Fl. Lond.* — * Tall.
2 Pratensis. *L.* 122. *H.* 52. *R.* 405. *t.* 21. *f.* 1. — * Meadow.
3 Pubescens. *L.* 122. *H.* 52. *R.* 406. *t.* 21. *f.* 2. — * Rough.
4 Flavescens. *L.* 122. *H.* 53. *R.* 407. 5. *Fl. Lond.* — * Yellow.
5 Nuda. *L.* 122. *H.* 52. *R.* 389. 6. — * Naked.
6 Fatua. *L.* 122. *H.* 52. *R.* 389. 7. — * Bearded.

GENUS VII.

BRIZA. QUAKING-GRASS.

1 Media. *L.* 115. *H.* 38. *R.* 412. 1. — * Common.
2 Minor. *L.* 115. *H.* 38. *R.* 412. 2. — * Small.

GENUS VIII.

BROMUS. BROME-GRASS.

1 Mollis. *L.* 119. *H.* 48. *polymorphus. R.* 413. 5. — * Soft.
2 Secalinus. *L.* 119. *H.* 49. *polymorphus. R.* 414. 8. — * Field. Lob-Grass. Corn.
3 Squarrosus. *L.* 119. *H.* 49. — * Upright.
4 Erectus. *H.* 49. *R.* 413. 2. — * Wall.
5 Muralis. *H.* 50. — * Barren.
6 Sterilis. *L.* 120. *H.* 50. *R.* 412. *Fl. Lond.* — * Tall.
7 Giganteus. *L.* 120. *H.* 51. *R.* 415. 11. *Fl. Lond.*
8 Hirsutus. *L.* 119. *asper. H.* 51. *memoralis. R.* 415. 10. *Fl. Lond.* — * Hairy.

GENUS IX.

CYNOSURUS. DOGS-TAIL-GRASS.

1 Cristatus. *L.* 116. *H.* 59. *R.* 398. — * Crested.
2 Echinatus. *L.* 116. *H.* 59. *R.* 397. 5. — * Rough.
3 Cæruleus. *L.* 117. *H.* 59. *R.* 399. 4. — * Blue.

GENUS X.

DACTYLIS. COCKS-FOOT-GRASS.

1 Glomerata. *L.* 116. *H.* 43. *R.* 400. 2. — * Rough.
2 Maritima. *H.* 43. *cynosuroides. R.* 393. 4. — * Sea.

GENUS XI.

ELYMUS. LYME-GRASS.

1 Arenarius. *L.* 125. *H.* 56. — * Sea.
2 Geniculatus. — * Elbowed.
3 Caninus. *L.* 125. *H.* 58. *Triticum caninum. R.* 390. 2. — * Dog.

GENUS XII.

FESTUCA. FESCUE-GRASS.

1 Bromoides. *L.* 118. *H.* 46. *R.* 415. 13. — * Barren.
2 Myurus. *L.* 118. *H.* 46. *R.* 415. 12. — * Wall.
3 Ovina. *L.* 118. *H.* 44. *R.* 410. 9. — * Sherps. Hard.
4 Duriuscula. *L.* 118. *H.* 44. *R.* 413. 4. *t.* 19. *f.* 1. — * Welch.
5 Cambrica. *H.* 45. — * Decumbent.
6 Decumbens. *L.* 119. *H.* 47. *R.* 408. 11. — * Meadow.
7 Pratensis. *H.* 47. *var. fluitans. R.* 411. 16. — * Tall.
8 Elatior. *L.* 118. *H.* 47. *R.* 411. 14. — * Darnel.
9 Loliacea. *H.* 47. *var. fluitans.* — * Flote.
10 Elatior. *L.* 119. *H.* 46. *R.* 412. 17. *Fl. Lond.*
11 Pinnata. *H.* 48. *R.* 392. § — * Spiked. Purple. Smooth.
12 Rubra. *L.* 118. *H.* 45. — * Sea.
13 Glabra. *Lightfoot Fl. Scot. App.* 9. 1085. — * Wood.
14 Uniglumis. *H.* 55. *Lolium brevisetum. R.* 413. 3. *t.* 17. *f.* 2. *
15 Sylvatica. *L.* 120. *Bromus pannicus. H.* 48. *R.* 394. §

GENUS XIII.

HORDEUM. BARLEY-GRASS.

1 Murinum. *L.* 126. *H.* 56. *R.* 391. 1. *Fl. Lond.* — * Wall.
2 Maritimum. *H.* 56. *marinum. R.* 392. 3. — * Sea.
3 Pratense. *H.* 56. *R.* 392. 2. — * Meadow.
4 Sylvaticum. *H.* 57. *L.* 125. *Elymus europæus. R.* 392. — * Wood.

GENUS XIV.

HOLCUS. SOFT-GRASS.

1 Mollis *L.* 905. *H.* 440. *R.* 404. 15. *Fl. Lond.* — * Creeping.
2 Lanatus *L.* 905. *H.* 440. *R.* 404. 14. *Fl. Lond.* — * Meadow.

GENUS XV.

LOLIUM. DARNEL-GRASS.

1 Perenne. *L.* 124. *H.* 55. *R.* 395. 2. — * Perennial, or Ray Grass.
2 Temulentum. *L.* 124. *H.* 55. *R.* 395. 1. — * Annual.

GENUS XVI.

MELICA. MELIC-GRASS.

1 Uniflora. *H.* 37. *nutans. R.* 403. 6. *Fl. Lond.* — * Single-Flowered.
2 Nutans. *L.* 112. *H.* 37. *montana. R.* 403. 7. — * Mountain.
3 Cærulea. *L.* 113. *H.* 33. *Aira cærulea. R.* 404. 8. — * Blue.

GENUS XVII.

MILIUM. MILLET-GRASS.

1 Effusum. *L.* 109. *H.* 29. *R.* 402. 1. *Fl. Lond.* — * Wood.
2 Lendigerum. *L.* 109. *H.* 28. *Alopecurus ventricosus. R.* 394. 4. — * Corn.

GENUS XVIII.

NARDUS. MAT-GRASS.

1 Stricta. *L.* 102. *H.* 22. *R.* 393. 2. — * Small.

GENUS XIX.

PANICUM. PANIC-GRASS.

1 Viride. *L.* 105. *H.* 24. *R.* 393. 1. *Fl. Lond.* — * Green.
2 Verticillatum. *L.* 105. *H.* 24. *R.* 394. 3. *Fl. Lond.* — * Whirled.
3 Crus-Galli. *L.* 105. *H.* 24. *R.* 394. 2. *Fl. Lond.* — * Leafe.
4 Sanguinale. *L.* 106. *H.* 25. *R.* 399. 2. *Fl. Lond.* — * Cocks Foot. Creeping.
5 Dactylon. *L.* 106. *H.* 25. *R.* 399. 1.

GENUS XX.

POA. MEADOW-GRASS.

1 Aquatica. *L.* 113. *H.* 38. *R.* 411. 13. *Fl. Lond.* — * Water or Reed.
2 Alpina. *L.* 113. *H.* 39. *var. alpina.* — * Alpine.
3 Trivialis. *L.* 113. *H.* 39. *R.* 409. 3. *Fl. Lond.* — * Rough-Stalked.
4 Pratensis. *L.* 113. *H.* 39. *R.* 409. 2. *Fl. Lond.* — * Smooth-Stalked.
5 Nemoralis. *L.* 115. *H.* 40. *angustifolia.* — * Wood. Bulbous.
6 Bulbosa. *L.* 115. *H.* 41. — * Flat-Stalked.
7 Compressa. *L.* 115. *H.* 41. *R.* 409. — * Dwarf.
8 Annua. *L.* 113. *H.* 42. *R.* 408. 1. *Fl. Lond.* — * Sea.
9 Maritima. *H.* 42. *R.* 409. 6. — * Reflexed.
10 Retroflexa. *L.* 115. *distans* ?. *H.* 34. *var. aira aquatica.* — * Hard.
11 Rigida. *L.* 114. *H.* 42. *R.* 410. 8. *Fl. Lond.* — * Crested.
12 Cristata. *L.* 115. *H. aira cristata.* 33. *R.* 396. 3.

GENUS XXI.

PHLEUM. CATS-TAIL-GRASS.

1 Arenarium. *L.* 108. *H.* 23. *Phalaris arenaria. R.* 398. 4. — * Sea.
2 Pratense. *L.* 107. *H.* 25. *R.* 398. 1. — * Meadow.
3 Nodosum. *L.* 108. *H. var. pratense.* — * Bulbous. Alpine.
4 Alpinum. *L.* 108. — * Branched.
5 Paniculatum. *H.* 26.

GENUS XXII.

PHALARIS. CANARY-GRASS.

1 Phleoides. *L.* 104. — * Cats-Tail.
2 Canariensis. *L.* 103. *H.* 23. — * Birds.
3 Arundinacea. *L.* 104. *H.* 23. *R.* 400. 1. — * Reed.

GENUS XXIII.

ROTTBOELLIA. HARD-GRASS.

1 Incurvata. *L.* 124. *H.* 441. *Ægilops incurva. R.* 395. 3. * Sea.

GENUS XXIV.

STIPA. FEATHER-GRASS.

1 Pennata. *L.* 121. *H.* 29. *R.* 393. 3. — * Long-Awned.

GENUS XXV.

TRITICUM. WHEAT-GRASS.

1 Junceum. *L.* 127. *H.* 58. *R.* 391. 4. — * Rushy.
2 Repens. *L.* 127. *H.* 57. *R.* 390. — * Creeping, or Couch-Grass.
3 Maritimum. *L.* 127. *H.* 43. *Poa loliacea. R.* 395. 4. — * Sea.

All those grasses which have an asterisk before their English names, are at present growing in my Botanic Garden, *Lambeth Marsh*.—*L.* refers to the 12th Edition of the *Systema Vegetabilium* of Linnæus, published by Prof. Murray, *Gottingæ*, 1784.—*H.* refers to the 2d Edition of Mr. Hudson's *Flora Anglica*.—*R.* to the 3d Edition of Mr. Ray's *Synopsis*.—And *Fl. Lond.* to the *Flora Londinensis*, in which, the grasses so referred to, are figured or their natural size.

In this Catalogue there are twelve more species enumerated than in Stillingfleet, and fifteen more than in the last Edition of Mr. Hudson's *Flora Anglica*; we have little doubt but some of these will prove varieties, particularly Alopecurus, 4. Bromus, 3. 5. Festuca, 12, and Poa, 6. some have, perhaps, no right to appear in a British List, as Avena, 5. and Phalaris, 2.—Phleum, 4, is inserted on the authority of Mr. Dixon, who discovered it in his late tour into Scotland.

We are far from considering this catalogue as complete; but, if it has no other use, it may excite others to make it so: though the work can never be finished so as to be applied with propriety to any part of Natural History, as new subjects are perpetually discovered, and which often make it necessary not only to add to, but to alter names and descriptions that have been long established.

BOTANIC-GARDEN, *LAMBETH-MARSH*, Aug. 7, 1787

Poa Retroflexa. Reflexed Meadow-Grass.

POA *Lin. Gen. Pl.* Triandria Digynia.

Cal. 2-valvis, multiflorus. *Spicula* ovata: valvulis margine ſcarioſis acutiuſculis.

Raii Syn. Gen. 27. Herbæ graminifoliæ flore imperfecto culmiferæ.

POA *retroflexa* panicula diffuſa, ramis poſt floreſcentiam retroflexis, ſpiculis ſublinearibus ſubquinquefloris.

POA *diſtans* panicula ramis ſubdiviſis, floribus quinquefloris: floſculis diſtantibus obtuſis. *Lin. Syſt. Vegetab. p.* 115. ?

AIRA aquatica var *B. Hudſon Fl. Angl. ed.* 2. *p.* 34.

RADIX perennis, fibroſa.

CULMI plures, ſpithamæi, pedales, aut ſeſquipedales, obliqui, folioſi, inferne ſubinfracti, teretes, læves.

FOLIA glauca, lævia, acuta, radicalia ſubconvoluta, caulina plana, erecto-patentia; *Ligula* brevis, obtuſa, ſubtruncata, ſubinde bifida; *Vagina* lævis.

FLORES paniculati, panicula palmaris aut ſeſquipedalis, diffuſa, ramis inæqualibus, ramoſis, ſubflexuoſis, tandem ad baſin pertumidis et retro porrectis, inferioribus ſubquinis.

SPICULÆ ſublineares, ſubquinquefloræ, nonnunquam penitus virides, at ſæpius albo et purpureo pulchre variegatæ, *fig.* 1, 2, 3.

CALYX: *Gluma* bivalvis, valvulis ovatis, obtuſis, concavis, inæqualibus, altero duplo breviore, *fig.* 4. auct.

COROLLA: bivalvis, valvulis ſubæqualibus, exteriore majore, concava, obtuſiuſcula, *fig.* 5, interiore plerumque bifida, ad lentem utrinque ciliata, *fig.* 6.

STAMINA: Filamenta tria, capillaria; Antheræ parvæ, luteæ, *fig.* 7.

PISTILLUM: Germen obovatum, *fig.* 8; Styli duo, patentes, ad baſin uſque ramoſi, *fig.* 9.

NECTARIUM: *Glumulæ* duæ, ovato-acutæ, ad baſin germinis, *fig.* 10.

Fig. 11 exhibet ſpiculam ſpeciminis ſiccati in qua floſculi remotiores et ſubtruncati.

ROOT perennial, and fibrous.

STALKS ſeveral, a ſpan, a foot or a foot and a half in length, oblique, leafy, ſlightly elbowed below, round and ſmooth

LEAVES glaucous, ſmooth, pointed, radical leaves ſomewhat rolled up, ſtalk-leaves flat, betwixt upright and ſpreading; *Membrane* ſhort, obtuſe, ſomewhat truncated, now and then bifid; *Sheath* ſmooth.

FLOWERS growing in a panicle, a hand's breadth or half a foot in length, ſpreading, the branches unequal, ramified, ſomewhat crooked, finally much ſwelled at the baſe, and ſtretched out backwards, the lowermoſt about five in number.

SPICULÆ ſomewhat linear, containing five flowers, more or leſs, ſometimes entirely green, but more often prettily variegated with white and purple, *fig.* 1, 2, 3.

CALYX: a *Glume* of two valves, the valves ovate, obtuſe, hollow, unequal one of them not more than half the length of the other, *fig.* 4. magnified.

COROLLA: compoſed of two valves, the valves nearly equal, the outer one largeſt, concave, a little blunt, *fig.* 5, the inner one uſually bifid, and, if magnified edged on each ſide with hairs, *fig.* 6.

STAMINA: three capillary Filaments; Antheræ ſmall and yellow, *fig.* 7.

PISTILLUM: Germen inverſely ovate, *fig.* 8: Styles two, ſpreading, branched down to the bottom, *fig.* 9.

NECTARY: compoſed of two ſmall *Glumes*, ovate and pointed, at the baſe of the germen, *fig.* 10.

Fig. 11 exhibits the ſpicula of a dried ſpecimen, in which the flowers are further apart, and appear ſomewhat truncated at top.

It is rather matter of admiration, that this Graſs ſhould have eſcaped the notice of Mr. Ray, ſince it is common in paſtures and by road ſides on all our ſea-coaſts, at leaſt where we have traveled; like the *Plantago maritima* and ſome other plants, it is not confined to maritime ſituations; for, to my great aſtoniſhment, I found it, July 1786, among the graſſy herbage on the right-hand ſide of the horſe-pad leading up the hill to Hampſtead in tolerable plenty.

Though, at firſt ſight, it bears a near reſemblance to the *Poa annua*, and for which I have no doubt but it is often miſtaken, a diſcerning eye will readily perceive a difference at a diſtance, and a cloſe examination will diſcover abundant matter to confirm it.

As it uſually grows, it is conſiderably taller than the *Poa annua*, its leaves are narrower in proportion, and much more glaucous, its ſpiculæ alſo are much narrower as well as longer, and, of courſe, contain many more florets; theſe are for the moſt part prettily variegated with pale green and purple; but the grand character which diſtinguiſhes it from the *Poa annua*, and, as far as we have obſerved from all the other Poas, is to be drawn from the branches of the panicle; theſe, as the plant goes out of bloom, are reflected or ſtretched out backwards, ſo as ſometimes to touch the culmus or main ſtem. On examining into the cauſe of this, I found it was effected by little tubercles at the baſe of the branches on their upper ſides only, which increaſing in ſize as the plant advanced in its flowering, forced them backwards.

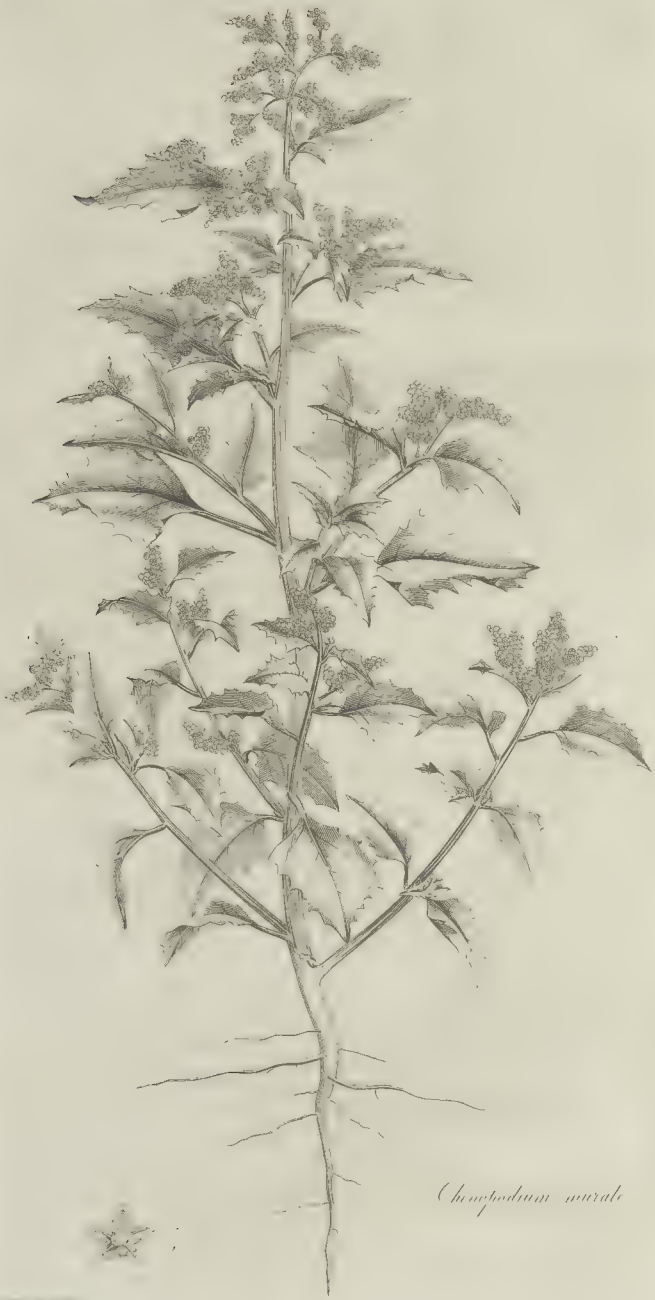
The peculiarity of this character induced us to adopt a name expreſſive of it, notwithſtanding we had ſtrong reaſons to ſuppoſe our plant the *Poa diſtans* of Linnæus, a term expreſſing very diſtatly indeed any character of the plant.

Mr. Hudson gives a particular deſcription of this Graſs, but conſiders it as a variety only of the *Aira aquatica:* what could induce him to form ſuch an opinion, is difficult to ſay, we can aſſure our readers, that ſix years culture has made no alteration in the appearance of the *Poa retroflexa.*

There does not appear to be ſufficient merit in this Graſs to recommend it for agricultural purpoſes.

It flowers from June to September.

Poa retroflexa.



Chenopodium murale

CHENOPODIUM MURALE. NETTLE-LEAVED GOOSEFOOT.

CHENOPODIUM *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5-phyllus, 5-gonus. *Cor.* 0. *Sem.* 1. lenticulate, ſuperum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHENOPODIUM *murale* foliis ovatis nitidis dentatis acutis, racemis ramoſis nudis. *Lin. Syſt. Vegetab. p.* 261. *Sp. Pl. p.* 318. *Fl. Suec.* 216.

ATRIPLEX ſylveſtris latifolia, acutiore folio. *Bauh. Pin.* 119.

ATRIPLEX dicta Pes anſerinus alter ſ. ramoſior. *Bauh. hiſt.* 976.

ATRIPLEX ſylveſtris latifolia altera. *Ger. emac.* 328.

BLITUM Pes anſerinus dictum acutiore folio. *Raii Syn. p.* 154. ? The other Gooſefoot. *Hudſ. Fl. Angl. ed.* 2. *p.* 105.

Tota planta gravem odorem ſpirat.

The whole plant ſmells diſagreeably.

RADIX annua, fuſiformis, albida, rigida, fibrillis plurimis patentibus inſtructa.

ROOT annual, tapering, whitiſh, rigid, furniſhed with numerous ſpreading ſmall fibres.

CAULIS erectus, pedalis ad bipedalem, ramoſiſſimus, ſubangulaſus, inferne glaber, ſuperne farinoſus, plerumque viridis, ſæpe purpureus aut lineis purpureis notatus.

STALK upright, one or two feet high, very much branched, ſlightly angular, below ſmooth, above mealy, moſt commonly green, but often wholly purple, or marked with purple lines.

RAMI alterni, pulverulenti.

BRANCHES alternate and mealy.

FOLIA alterna, petiolata, ſubovata, acuta, inæqualiter ſerrata, ſuperne nitida, inferne pulverulenta, apicibus denticulorum rubicundis.

LEAVES alternate, ſtanding on footſtalks, ſubovate, pointed, unequally ſawed, above gloſſy, beneath mealy, the tips of the teeth reddiſh.

PETIOLI ſuperne canaliculati, longitudine foliorum.

LEAF-STALKS hollow above, the length of the leaves.

FLORES nunc herbacei, nunc purpurei, racemoſi, racemis brevibus, nudis, ramoſis, depreſſis, apice inflexis.

FLOWERS ſometimes green, ſometimes purple, growing in bunches or racemi, which are ſhort, naked, branched, depreſſed, and bent in at the tip.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, carinatis, farina diaphana adſperſis, perſiſtentibus, marginibus membranaceis, albidis, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, the leaves ovate, concave, keeled, permanent, ſprinkled with tranſparent meal, the edges membranous and whitiſh, *fig.* 1.

COROLLA nulla.

COROLLA wanting.

STAMINA: FILAMENTA quinque, alba, calyce paulo longiora; ANTHERÆ majuſculæ, ochroleucæ, didymæ, *fig.* 2.

STAMINA: five white FILAMENTS, a little longer than the calyx: ANTHERÆ largiſh, yellow, and double, *fig.* 2.

PISTILLUM: GERMEN orbiculatum: STYLI duo, breviſſimi, minimi, fere inconſpicui, *fig.* 3.

PISTILLUM: GERMEN round and flat; STYLES two, very ſmall and ſhort, almoſt inconſpicuous, *fig.* 3.

The leaves of this ſpecies of *Chenopodium* have ſome ſmall reſemblance to thoſe of the great Stinging-Nettle, hence we have given it the Engliſh name of *Nettle-leaved*, in preference to that of *wall (murale)* to which, from its place of growth, with us at leaſt, it has little pretenſions, as it is uſually found on dunghills, and on banks by road ſides.

It grows plentifully on moſt of the great roads leading from the metropolis; we have ſeen it in very great abundance during the late autumn on the Edgware road. It flowers from Auguſt to October.

The whole plant is ſometimes entirely green, and ſometimes tinged with red.

It is moſt ſtrikingly diſtinguiſhed from the other ſpecies by the particular form of its racemi, or flower branches, which are ſhort and ſpread out widely, ſo as to give them a flat or depreſſed appearance, the tops ſomewhat curled in; in the *rubrum* and *urbicum*, the ſpecies moſt liable to be miſtaken for it, the racemi are perfectly upright; its gloſſy leaves and unpleaſant ſmell contribute alſo to point it out.

Like moſt of the other plants of this genus, it affords plenty of ſeeds, which aſſiſt in ſupporting the numerous tribe of ſmall hard-billed birds.

CHÆROPHYLLUM TEMULUM. SMALL COW-PARSLEY.

CHÆROPHYLLUM *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Involucrum reflexum, concavum. *Petala* inflexo-cordata. *Fructus* oblongus, lævis.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

CHÆROPHYLLUM *temulum*, caule ſcabro: geniculis tumidis. *Lin. Syſt. Vegetab. p.* 288. *Spec. Plant. p.* 370. *Fl. Suec. n.* 258.

MYRRHIS foliis hirſutis, laciniis obtuſis, caule geniculato. *Haller hiſt. n.* 750.

CHÆROPHYLLUM ſylveſtre. *Bauh. Pin.* 152.

CEREFOLIUM ſylveſtre. *Ger. emac.* 1038. *Park.* 915.

ANTHRISCUS Plinii quibuſdam, femine longo Cicutariæ aut Chærophylli. *I. B.* III. 2. 70. *Raii Syn. p.* 207. Wild Chervil. *Hudſon Fl. Angl. ed.* 2. *p.* 125. *Lightfoot Fl. Scot. p.* 167.

RADIX biennis, ſubramoſa, albida.

ROOT biennial, ſomewhat branched, and whitiſh.

CAULIS bipedalis et ultra, erectus, ramoſus, teres, ſolidus, ad genicula fragiles, aut penitus atropurpureus, aut maculis atropurpureis adſperſus, breviſſimis pilis veſtitus, ſcabriuſculus, geniculis tumidis et manifeſte ſtriatis.

STALK two feet or more in height, upright, branched, round, ſolid, brittle at the joints, either wholly of a dark purple, or ſpotted with the ſame colour, covered with very ſhort hairs, and roughiſh to the touch, the joints ſwelled and obviouſly ſtriated.

FOLIA radicalia et ramea ex petiolo vaginante orta, hirſutula, mollia, flaccida, duplicato-pinnata, pinnis ſubovatis, obtuſis et lobato-inciſis.

LEAVES next the root and thoſe of the branches furniſhed with a foot-ſtalk which has a ſheath at bottom, ſlightly hirſute, ſoft, flaccid, doubly pinnated, the pinnæ ſomewhat ovate, obtuſe, and cut into lobes.

UMBELLÆ florentes erectæ, aut in latus parum inclinatæ, antea valde nutantes.

UMBELS when in flower upright, or inclined a little to one ſide, when young drooping very much.

UMBELLA *univerſalis* componitur ex radiis numero variis, a quinque ad duodecim, exterioribus longioribus, *partialis* radii numero fere duplicantur.

UMBEL: the *univerſal* one is compoſed of rays which vary in number from five to twelve, the outermoſt longeſt, the *partial* umbel has almoſt twice as many.

INVOLUCRUM *univerſale* plerumque nullum, *partiale* conſtat foliolis plus minus ſenis, lanceolatis, acutis, reflexis.

INVOLUCRUM: the *general* involucrum is for the moſt part wanting, the *partial* one conſiſts of ſix leaves, more or leſs, which are lanceolate, pointed, and turned back.

COROLLA *univerſalis* ſubuniformis, floſculis diſci raro niſi in ſero florentibus abortientes; *propria* petalis quinque, albis, inflexo-cordatis, exterioribus paulo majoribus, *fig.* 1. *auct.*

COROLLA: the *univerſal* corolla ſomewhat uniform, the florets of the diſk rarely abortive, unleſs in thoſe which flower late, each *individual* compoſed of five white petals, which, having the tip bent inward, become heart-ſhaped, the outermoſt ones rather largeſt, *fig.* 1. *magn.*

STAMINA: FILAMENTA quinque alba: ANTHERÆ albidæ, *fig.* 2.

STAMINA: five white FILAMENTS; ANTHERÆ whitiſh, *fig.* 2.

PISTILLUM: GERMEN inferum; STYLI duo reflexi; STIGMATA obtuſa, *fig.* 3.

PISTILLUM: GERMEN beneath the flower; STYLES two, reflexed; STIGMATA blunt, *fig.* 3.

SEMINA oblonga, glabra, fuſca, acuta, intus concava, extus obſolete et obtuſe quinque ſulcata, angulis pallentibus, *fig.* 4.

SEEDS oblong, ſmooth, brown, pointed, on the inſide hollow, on the outſide faintly and bluntly marked with five grooves, the angles paler, *fig.* 4.

The *Chærophyllum temulum* is nearly as common a plant as the *ſylveſtre*, flowers a month or ſix weeks later, and is more confined to ſheltered ſituations; it delights to grow under hedges, but is rarely met with in open paſtures.

The roughneſs, deep purple colour, and ſwelled joints of the ſtalk, readily diſtinguiſh it not only from the *ſylveſtre*, but from our other umbelliferous plants; the ſtalk is alſo frequently ſpotted with purple, and hence the ignorant, who often diſtinguiſh the Hemlock by that character alone, may be led to miſtake it for that plant, we may remark alſo, that the umbels, when young, droop remarkably.

Why LINNÆUS ſhould give it the name of *temulum*, unleſs from the laſt-mentioned circumſtance, we know not: HALLER, who read almoſt every book on Botany and Medicine, is ſilent as to its effects.

The ſeeds afford the beſt diſtinction of the genus *Chærophyllum*, the *general involucrum* being with us for the moſt part wanting, both in this ſpecies and the *ſylveſtre*.

Chærophyllum temulum

Salix monandra

SALIX MONANDRA. BITTER WILLOW.

SALIX *Lin. Gen. Pl.* DIOECIA DIANDRIA.

MASC. *Amenti* ſquamæ. *Cor.* 0. *Glandula* baſeos nectarifera.

FÆM. *Amenti* ſquamæ. *Cor.* 0. *Stylus* 2-fidus. *Capſ.* 1-locularis, 2-valvis. *Sem.* pappoſa.

Raii Syn. Gen. 28. ARBORES ET FRUTICES.

SALIX *monandra* foliis ſerratis, glabris, lineari-lanceolatis, ſuperioribus obliquis. *Hoffman hiſt. Salic. p.* 18.

SALIX *purpurea* foliis ſerratis glabris lanceolatis: inferioribus oppoſitis. *Lin. Syſt. Vegetab. p.* 879. *Sp. Pl. p.* 1444. *Fl. Suec. n.* 884.

SALIX *Helix* foliis ſerratis glabris lanceolato-linearibus: ſuperioribus oppoſitis obliquis. *Lin. Syſt. Vegetab. p.* 879. *Sp. Pl.* 1444.

SALIX monandra, foliis glabris, lineari-lanceolatis, ſerratis, ſuperne conjugatis, julis tomentoſis. *Hall. hiſt. n.* 1640.

SALIX *purpurea. Scopoli Fl. Carn. n.* 1209. DIAGN. *ſquamæ monandræ.*

SALIX *monandra. Arduin. Memor.* 1. *Spec.* 67. *tab.* 11.

SALIX humilior foliis anguſtis ſubcæruleis ex adverſo binis. *Raii Syn.* 448. The yellow dwarf Willow.

SALIX Helice *Theophraſti Lugdun. p.* 277. *Hudſ. Fl. Angl. ed.* 2. *p.* 427. *Lightfoot Fl. Scot. p.* 597.

FRUTEX mediocris, debilis, ramoſus, in arbuſculum nobiſcum ſæpe excreſcens, in ſeptentrionali parte Angliæ multo humilior.

A SHRUB of a middling ſize, weak, branched, with us often growing up into a ſmall tree, in the North of England of much humbler growth.

RAMI tenues, teretes, viminei, tenaciſſimi, nitidi, cortice cinereo, olivaceo, ſeu purpuraſcente, nobiſcum raro intenſe purpureo.

BRANCHES ſlender, round, twiggy, extremely tough, gloſſy, the bark aſh-coloured, olive, or purpliſh, ſeldom of a deep purple with us.

FOLIA nunc oppoſita, nunc alterna, idque in eadem planta, petiolata, lanceolata, verſus apicem latiora, apice acuta, baſi obtuſa, ſemunciam circiter lata, multo etiam latiora, *fig.* 6. et anguſtiora occurrunt, margine nunc undique ſerrata, nunc ſuperne tantum, etiam integerrima, lævia, ſuperne e cæruleo viridia, ſubtus glauca, idque ſemper quoad obſervavimus, avenia, nervo medio albido, glandulis deſtituta, *ſapore amariſſimo.*

LEAVES now oppoſite, now alternate, and that in the ſame plant, ſtanding on footſtalks, lanceolate, broadeſt towards the tip, pointed at the end, obtuſe at the baſe, about half an inch in breadth, but much broader, *fig.* 6. and much narrower leaves occur, the edge ſometimes ſerrated throughout, ſometimes above only, even perfectly entire, ſmooth, above of a blueiſh green colour, beneath glaucous, and that always as far as we have obſerved, veinleſs, the midrib whitiſh, without glands, and of an *extremely bitter taſte.*

PETIOLUS brevis, baſi latior.

LEAF-STALK, ſhort, broadeſt at the baſe.

AMENTA *maſcula* plurima, ſubterminalia, nunc oppoſita, idque alterne, nunc alterna, ſubſeſſilia, pollicaria, cylindracea, compacta, erectiuſcula, ſæpe incurvata, primum e rufo-nigricantia, lanugine incana, exſertis antheris pulchre aurantiaca; *ſquamæ* ſubrotundæ, concavæ, piloſæ, ad medium uſque nigræ, intus ſæpe rubellæ, demum reflexæ, *fig.* 1.

CATKINS of the *male plant* numerous, ſomewhat terminal, ſometimes oppoſite, and that alternately ſo, ſometimes alternate, nearly ſeſſile, about an inch in length, cylindrical, compact, nearly upright, often bowed, at firſt of a reddiſh black colour, covered with a grey down, when the antheræ put forth, of a beautiful orange; *ſcales* roundiſh, concave, hairy, black as far as the middle, often reddiſh withinſide, finally reflexed, *fig.* 1.

STAMEN: FILAMENTUM unicum, ſquamâ duplo longius, filiforme, piloſum; ANTHERA majuſcula, *fig.* 2, quadrangula, *quadriloba*, primo aurantiaca, dein flava, demum nigricans.

STAMEN: one FILAMENT twice the length of the ſcale, filiform, hairy; ANTHERA largiſh, *fig.* 2, quadrangular, *compoſed of four lobes*, at firſt orange-coloured, then yellow, laſtly blackiſh.

NECTARIUM: *Glandula* truncata, emarginata, flaveſcens, ſeſſile, *fig.* 3.

NECTARY: a *Gland* truncated, emarginate, yellowiſh, and ſeſſile, *fig.* 3.

AMENTA *fœminea*, maſculis quoad formam ſimilia, at flaveſcentia, et minus contorta, *fig.* 5.

CATKINS of the *female*, ſimilar in ſhape to thoſe of the male, but yellowiſh and leſs diſtorted, *fig.* 5.

PISTILLUM: GERMEN ovatum, ſubgloboſum, ſeſſile; STYLUS vix ullus; STIGMA bilabiatum, flaveſcens, labiis emarginato bifidis, demum e rufo nigricantibus, *fig.* 4.

PISTILLUM: GERMEN ovate, almoſt globular, ſeſſile; STYLE ſcarcely any; STIGMA forming two lips, yellowiſh, the lips ſlightly bifid, finally of a reddiſh black colour, *fig.* 4.

The

The Willows are a tribe of plants, not leſs diſtinguiſhed for their great utility in rural œconomy, than for the difficulty which has hitherto attended the aſcertaining of the ſeveral ſpecies: it will, perhaps, be found, that this difficulty is not peculiar to the Willows, but that a vaſt many other plants are ſubject to an equal inconſtancy of appearance from ſimilar cauſes: we are not to be diſheartened in our reſearches, becauſe we meet with difficulties, they ought rather to incite us to a more diligent examination, and if we do not ſucceed at one time, we probably ſhall at another; we have found, by experience, that the eye does not at all times poſſeſs the ſame degree of acuteneſs, and that the character of a plant, which, at one period, has been overlooked, at another, has formed its moſt prominent feature.

Impreſſed with theſe ideas, we ſet about inveſtigating the Willows, with the greater pleaſure, indeed, as we found, on examining them, that the parts of fructification, hitherto but little noticed, are capable of throwing a great light on the ſubject: the ſtamina in ſome, and the piſtilla in others, differ in their appearance beyond expectation. Thus the male plant of the preſent ſpecies, if every other character were wanting, would be diſtinguiſhed when in flower from our other Willows, by its ſtamina alone: each ſcale of the catkin produces one filament only; hence, according to Linnean uſage, it is called monandrous: but, it is very remarkable, that though there is only one filament, it ſupports two antheræ, and hence, in ſtrict propriety, it may be conſidered as diandrous. The antheræ, before they open, are of a bright orange colour, and impart to the catkin an appearance ſtrikingly beautiful; the female catkins are ſimilar in ſhape, but want the brilliancy of the male.

Unfortunately the flowering period in the Willows is of ſhort duration; during the greateſt part of the ſummer, we have no flowers to aſſiſt us in our inveſtigations, and even during that period, it frequently happens, eſpecially in the cultivated Willows, which are uſually raiſed from cuttings, that we can diſcover one ſex only; it is not ſo, indeed, in thoſe Willows which are more in a ſtate of nature, yet, when the flowering is over, ſize, mode of growth, leaves, ſtipulæ, or ſome other part of the plant, will generally afford a good ſpecific character.

The preſent ſpecies, when out of bloom, is particularly diſtinguiſhed by the length, as well as delicate ſlenderneſs of its twigs, and its ſubglaucous ſpurge-like leaves, but, above all, by their extreme bitterneſs when chewed, it is for this reaſon we have called it the *bitter* Willow.

Theſe ſeveral characters, which are not liable to vary, and ſome of which are always preſent, will, if in the leaſt degree attended to, readily diſcriminate this ſpecies. The leaves of moſt of the Willows are unfortunately ſubject to a great diverſity of appearance from a variety of cauſes; thoſe of the monandra are by no means exempt from this inconſtancy of appearance; they vary greatly, both in ſize and breadth, and ſtill more in the notchings of the leaves (ſee the deſcription) the ſtalks alſo vary greatly in colour, being ſometimes almoſt yellow: the leaves on the ſummits of the twigs are ſometimes found towards the end of Auguſt, of a brilliant red colour, which produces a moſt charming effect; this ſingularity is, however confined to particular plants: the tops of the branches are ſometimes found expanded in this Willow into little ſquamous heads, ſomewhat reſembling roſes, whence, by ſome, it has been called *roſe* Willow; this is the effect of an inſect, and, of courſe, accidental.

The *ſalix monandra* grows ſparingly in the neighbourhood of London, it is found moſt commonly in hedges, ſometimes in oſier-grounds, where it is accidentally introduced; in ſome parts of the North of England, there is no Willow more common; it is the earlieſt in bloom of any of the Willows we are acquainted with, flowering in mild ſeaſons, by the end of February, uſually before the *Caprea*.

The extreme bitterneſs of the leaves and twigs of this ſpecies, renders it very valuable for many purpoſes. When uſed as a band or withe, it is never eaten by vermin; nor, when formed into a hedge, is it browſed on by cattle; even inſects prey on it much leſs readily than on the other ſpecies. In ſome parts of Yorkſhire, its twigs are uſed for making the fineſt ſorts of baſket-work; and, from the obſervations we have made, we ſhould think it might be advantageouſly cultivated for ſuch purpoſes. By way of experiment, we one year planted a row of cuttings of all the common Willows, and were ſurpriſed to find, that the very longeſt one-year's ſhoot was that of the bitter Willow, it exceeded even that of the Oſier *(Salix viminalis)* which was the next longeſt.

The bark of ſome of the Willows has been uſed as a ſubſtitute for the Peruvian Bark in the cure of agues; that of the preſent ſpecies, from its extreme bitterneſs, may probably prove more efficacious.

The leaves of this plant become of a blueiſh black colour in drying.

Profeſſor Hoffman, who has publiſhed ſome very accurate figures and deſcriptions of the Willows, indiſputably proves, that the *purpurea* and *helix* of Linnæus are one and the ſame ſpecies; he, therefore, conſidering them as ſuch, rejects both thoſe names, and adopts that of Arduini; concurring, from the moſt perfect conviction, in opinion with the learned Profeſſor, we follow him in this inſtance of reform.

Datura Stramonium.

DATURA STRAMONIUM. THORN-APPLE.

DATURA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. infundibuliformis, plicata. *Cal.* tubulosus, angulatus, deciduus. *Caps.* 4-valvis.

Raii Syn. Gen. 16. HERBÆ BACCIFERÆ.

DATURA *Stramonium* pericarpiis spinosis erectis ovatis, foliis ovatis glabris. *Lin. Syst. Vegetab. p.* 220. *Sp. Pl. p.* 255. *Fl. Suec. n.* 198.

STRAMONIUM foliis angulosis, fructu erecto, muricato, calyce pentagono. *Haller hist. n.* 586.

STRAMONIUM *fœtidum. Scopoli Fl. Carniol. n.* 152.

SOLANUM fœtidum pomo spinoso oblongo, flore albo. *Bauh. Pin.* 164.

STRAMONIUM spinosum. *Ger. emac.* 349.

SOLANUM pomo spinoso, oblongo, flore calathoide Stramonium vulgo dictum. *Raii Syn.* 266. *Hudson. Fl. Angl. ed.* 2. *p.* 92.

RADIX annua, ramosa, albida.

CAULIS variæ altitudinis pro ratione soli, pedalis, ad sepedalem, teres, glaber, late diffusus, ramosus, ramis dichotomis, minutim pubescentibus.

FOLIA e dichotomia caulis et ramorum, solitaria, vix spithamea, petiolata, ovata, acuta, utrinque glabra, superne saturate viridia, inferne et ad margines pallidiora, nervis robustis, subalternis, margine undique inæqualiter sinuato-dentata, uno latere per petiolum longius extenso.

PETIOLI teretes, pubescentes, foliis breviores, superne obsolete canaliculati.

FLORES solitarii, e dichotomia caulis, una cum foliis egredientia, breviter pedunculati, erecti.

CALYX: PERIANTHIUM monophyllum, oblongum, tubulatum, ventricosum, dilute viridescens, quinquangulare, quinquedentatum, deciduum horizontaliter prope basin, parte remanente, orbiculata, persistente.

COROLLA monopetala, infundibuliformis, nivea, *Tubus* viridescens, pentagonus, calyce brevior; *Limbus* basi nervosus, erecto-patulus, quinquangularis, quinqueplicatus, quinquedentato-acuminatus, *fig.* 1.

STAMINA: FILAMENTA quinque, subulata, inferne tubo corollæ adnata, superne libera; ANTHERÆ ovali-lineares, erectæ, insidentes, e fusco-lutescentes, *fig.* 2.

NECTARIUM: *Glandula* crenata, annularis, ad basin germinis, *fig.* 3.

PISTILLUM: GERMEN superum, subconicum, undique hispidum; STYLUS filiformis, albus, superne paulo crassior, longitudine staminum. STIGMA crassiusculum, obtusum, bilamellatum, *fig.* 4, 5, 6.

PERICARPIUM: CAPSULA spinosa, subovata, bilocularis, quadrivalvis, basi calycis imposita, *fig.* 7.

SEMINA numerosa, subreniformia, nigricantia.

ROOT annual, branched, whitish.

STALK various in its height, according to the soil in which it grows, rising from one to six feet, round, smooth, spreading widely, branched, branches forking, and covered with a fine down.

LEAVES springing from the forking of the stalk and branches, single, scarcely six inches long, standing on footstalks, ovate, pointed, smooth on both sides, above of a deep green colour, beneath and on the edges paler, ribs strong, somewhat alternate, the edge through its whole extent unequally sinuated and toothed, extending farther down the footstalk on one side than on the other.

LEAF-STALKS round, downy, shorter than the leaves, above faintly channelled.

FLOWERS single, proceeding together with the leaves from the forking of the stalk, standing on short footstalks and upright.

CALYX: a PERIANTHIUM of one leaf, oblong, tubular, bellying out, of a pale green colour, having five angles and five teeth, separating horizontally near the base, the remaining part orbicular and permanent.

COROLLA monopetalous, funnel-shaped, white, *Tube* greenish, five-cornered, shorter than the calyx; *Limb* ribb'd at the base, upright and spreading, five-cornered, with five plaits and five long pointed teeth, *fig.* 1.

STAMINA: five FILAMENTS, tapering, below attached to the tube of the corolla, above loose; ANTHERÆ betwixt oval and linear, upright, sitting, of a brownish yellow colour, *fig.* 2.

NECTARY: a circular notched *Gland* at the base of the germen, *fig.* 3.

PISTILLUM: GERMEN above the calyx, somewhat conical, hispid; STYLE filiform, white, thickened a little above, the length of the stamina. STIGMA thickish, obtuse, and composed of two lamellæ, *fig.* 4, 5, 6.

SEED-VESSEL: a CAPSULE, thorny, subovate, of two cavities, and four valves, placed on the base of the calyx, *fig.* 7.

SEEDS numerous, somewhat kidney-shaped and blackish.

The Thorn-apple is found occasionally in the environs of London, on dunghills, in cultivated ground, and amongst rubbish; both Mr. RAY and Mr. HUDSON place it amongst the British plants, regarding it at the same time as a doubtful native; following their example, we have figured it in the *Flora Londinensis*, induced thereto from the additional consideration of its being a poisonous plant, and, as such, necessary to be known to our readers.

That it is a native of America, we have the most indubitable proofs: in the earth brought with plants from various parts of that extensive country, we are sure to have the Thorn-apple come up, which we shall not wonder at, after perusing the following extract from KALM's Travels into North-America. "The *Datura* "*Stramonium* grows in great quantities in all the villages; its height is different according to the soil it is "in: for, in a rich soil, it grows eight or ten feet high; but, in hard and poor ground, it will seldom come "up to six inches. This *Datura*, together with the *Phytolacca*, or American Nightshade, grow here in those "places near the gardens, houses, and roads, which in Sweden are covered with Nettles and Goosefoot, "which European plants are very scarce in America; but the *Datura* and *Phytolacca* are the worst weeds "here, nobody knowing any particular use of them."

There

There is great reaſon to ſuppoſe, that it is alſo a native of ſome parts of Europe and Aſia.

Authors univerſally agree in attributing poiſonous qualities to the Thorn-apple.—BERGIUS, a modern writer on the Materia Medica, relates, that the narcotic effluvia of the freſh plant affected him ſo powerfully as he was deſcribing it, that with the ſmell, and chewing a bit of the plant, he became ſlightly intoxicated, as if unaccuſtomed to tobacco he had inhaled its fumes.

A decoction of the herb, ſeed-veſſels, or ſeeds, have been found to produce different effects in different conſtitutions, but the ſymptoms moſt commonly attendant on taking this plant, are light-headedneſs, profound ſleep, inſanity, madneſs, convulſions, palſy of the limbs, cold ſweats, vehement thirſt, and tremblings.

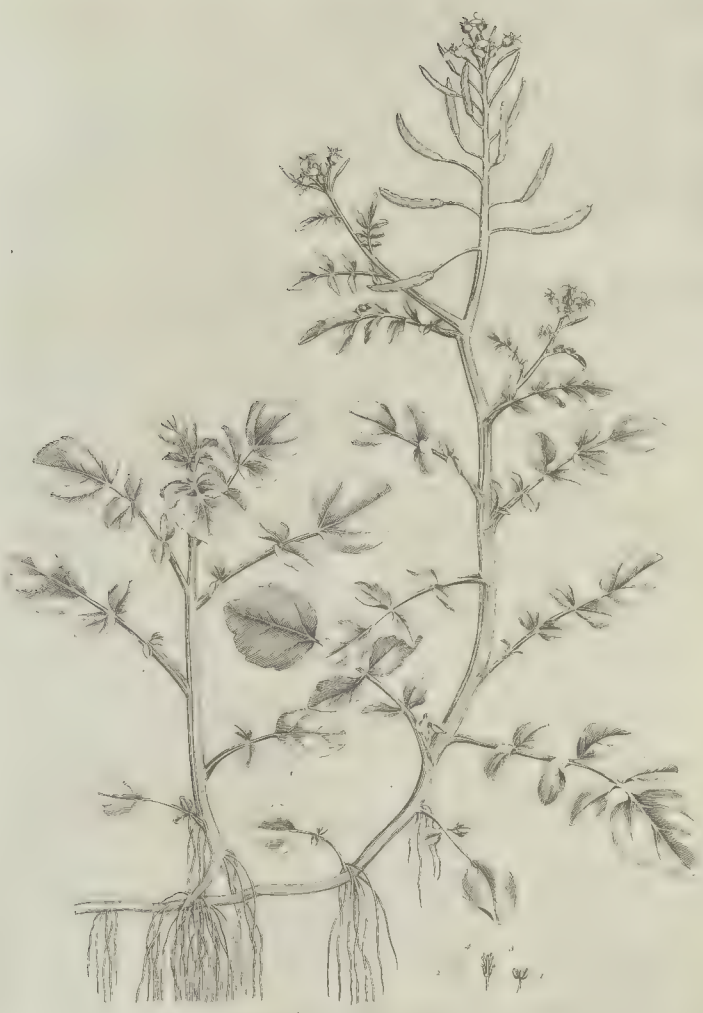
HALLER mentions a caſe in which taking of the ſeeds proved fatal; they had been adminiſtered for thoſe of *Nigella*.

The Chineſe are forbid by law from putting it into fermented liquors, with a view to intoxicate.

As the moſt active poiſons, in proper doſes ſkilfully adminiſtered, frequently prove efficacious in removing obſtinate diſeaſes; ſo this, as well as ſeveral others, has been recommended for ſuch purpoſe. Dr. STORK, of Vienna, firſt propoſed it as a remedy for thoſe very diſeaſes it is capable of exciting.

An extract made from the expreſſed juice of the leaves, is acrid and ſaline to the taſte, and yields cryſtals of nitre on ſtanding. This preparation, given in doſes of from one to five grains, twice or thrice a day, is ſaid to be a very powerful remedy in various convulſive and ſpaſmodic diſeaſes, epilepſy and mania. The accounts of other practitioners have confirmed that of the firſt introducer, and it has been received into ſome pharmacopeias. An ointment prepared from the leaves, has been found to give eaſe in external inflammations and hemorrhages.

Emetics and purgatives give the ſpeedieſt relief in caſes where the plant has been inadvertently eaten, which it is ſometimes neceſſary frequently to repeat, as ſome of the ſeeds have been found to lodge a conſiderable time in the ſtomach.



Tropæolum Nasturtium

SISYMBRIUM NASTURTIUM. WATER-CRESS.

SISYMBRIUM *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Silicula dehiſcens valvulis rectiuſculis. *Cal.* patens. *Cor.* patens.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

SISYMBRIUM *Naſturtium* ſiliquis declinatis, foliis pinnatis, foliolis ſubcordatis. *Lin. Syſt. Vegetab. p.* 594. *Sp. Pl.* 916. *Fl. Suec. n.* 592.

SISYMBRIUM foliis pinnatis, pinnis ſubrotundis, brevibus racemis. *Haller hiſt.* 482.

SISYMBRIUM *Naſturtium. Scopoli Fl Carn. n.* 821.

NASTURTIUM aquaticum ſupinum. *Bauh. Pin.* 104.

SISYMBRIUM Cardamine, ſeu Naſturtium aquaticum. *I. B.* II. 884.

NASTURTIUM aquaticum vulgare. *Park.* 1329.

NASTURTIUM aquaticum ſeu Cratevæ ſium. *Ger. emac.* 257. *Raii Syn. p.* 300. Water-Creſſes. *Hudſon Fl. Angl. ed.* 2. *p.* 296. *Lightfoot Fl. Scot. p.* 350.

NASTURTIUM aquaticum foliis minoribus præcocius. Early flowering Water-Creſſes with ſmaller leaves. *Raii Syn.* 301.

NASTURTIUM aquaticum pinnulis paucioribus. *Raii Syn. p.* 301.

RADIX annua, fibroſiſſima, fibris albidis.
CAULES plures, ad baſin plerumque repentes, ſuberecti, pedales, bipedales et ultra, purpuraſcentes, anguloſi, ſulcati, ramoſi, glabri, ſiſtuloſi.
FOLIA caulina pinnata, ſemi-amplexicaulia, glabra, pinnis trium ſeu quatuor parium, oppoſitis, ovatis, obtuſis, ſubemarginatis, obtuſe dentatis, ſeſſilibus, externa rotundiore ad apicem ſæpe attenuata; axillis radices agentibus; radicalia omnia rotundiora.

FLORES parvi, albi, numeroſi, racemoſi, racemis erectis.
PEDUNCULI primo erecti, demum patentes, ſubdeclinati, ſiliquis breviores.

CALYX: PERIANTHIUM 4-phyllum, foliolis oblongis, concavis, obtuſis, erectis, flaveſcentibus, *fig.* 1.
COROLLA: PETALA 4, ſubrotunda, alba, demum purpuraſcentia, *fig.* 2.
STAMINA: FILAMENTA 6, quorum duo breviora, primo ex albido vireſcentia, demum purpurea; ANTHERÆ flavæ, *fig.* 3.
PISTILLUM: GERMEN teres, vireſcens, tandem purpureum; STYLUS breviſſimus, vix ullus; STIGMA capitatum, *fig.* 4.
SILIQUÆ unciales, ſurſum ſubcurvatæ, patentes, ſubdeclinatæ ſeminibus protuberantibus turgidæ.

ROOT annual, extremely fibrous, fibres whitiſh.
STALKS numerous, uſually creeping at the baſe, nearly upright, a foot, two feet, or more, in height, purpliſh, angular, grooved, branched, ſmooth, and hollow.
LEAVES of the ſtalk pinnated, half embracing the ſtalk, ſmooth, the pinnæ or leaflets conſiſting of three or four pair, oppoſite, ovate, obtuſe, with a ſlight indentation at the end, bluntly toothed, ſeſſile, the end leaflet rounder than the others, often running out to a point, the alæ of the leaves putting forth roots, and all the radical leaves roundiſh.
FLOWERS ſmall, white, numerous, growing in racemi which are upright.
FLOWER-STALKS at firſt upright, finally ſpreading or a little depending, ſhorter than the pods.
CALYX: a PERIANTHIUM of four leaves, which are oblong, concave, obtuſe, upright, and yellowiſh, *fig.* 1.
COROLLA: 4 PETALS, roundiſh, white, finally of a purpliſh hue, *fig.* 2.
STAMINA: 6 FILAMENTS, of which two are ſhorter than the reſt, at firſt of a greeniſh white colour, laſtly purple; ANTHERÆ yellow, *fig.* 3.
PISTILLUM: GERMEN round, greeniſh, finally purple; STYLE very ſhort, ſcarce any; STIGMA forming a little head, *fig.* 4.
SEED-PODS, about an inch in length, bent a little upwards, ſpreading, ſlightly depending, turgid with ſeeds which protuberate.

Moſt people are acquainted with the leaves of the Water-creſs, few comparatively with the plant in flower; to render their knowledge of it complete, we have repreſented it in both ſtates.

It is a plant common not only to Europe but America, grows ſpontaneouſly in rivulets and watery ditches, and flowers in June, July, and Auguſt.

It varies in its appearance from ſeveral cauſes; the leaves, if growing in the ſhade, are of a green colour, if expoſed to the ſun, purpliſh brown; they rarely vary in their ſhape, yet we have ſeen inſtances of their being conſiderably elongated by growing in a ſtream where the current has been rapid; the alteration produced on the leaves of many other plants from the ſame cauſe, is well known to Botaniſts: in this ſtate there is a poſſibility that the leaves, by miſtake, may be eaten for thoſe of the creeping Water-parſnep (Sium nodiflorum) which uſually grows with it; if by accident they ſhould, no great danger is to be apprehended, as there are no inſtances on record of that plant's being poiſonous; to avoid, however, any alarm from ſuch a circumſtance, thoſe who are in the practice of eating Water-creſſes, ſhould obſerve, that the leaves are nearly round, and that they have the creſs-like taſte, the leaves of the Water-parſnep are not only long and pointed, but ſawed on the edges, they are alſo of a much paler colour, and have a very different taſte.

RAY mentions two other ſpecies of Water-creſs, which can only be conſidered as mere local varieties.

" This

" This plant has of late years been generally uſed as a ſalad-herb in the ſpring of the year, and is by many " preferred to all other ſorts of ſalads, for its agreeable warm bitter taſte, and being accounted an excellent " remedy for the ſcurvy and to cleanſe the blood, as alſo a good diuretic, it has greatly obtained a preference " to moſt other ſorts for winter and ſpring uſe with many people. This is generally gathered in the ditches " and other ſtanding waters near London, to ſupply the markets; but whoever has a mind to cultivate it, may " eaſily do it, by taking ſome of the plants from the places of their natural growth early in the ſpring, being " careful to preſerve their roots as entire as poſſible and plant them into mud, and then let the water in on " them by degrees; when they have taken root, they will ſoon flouriſh and ſpread over a large compaſs of " water: they ſhould not be cut the firſt ſeaſon, but ſuffered to run to ſeed, which will fall into the water, and " furniſh a ſufficient ſupply of plants afterwards; but where the water is ſo deep that it will not be eaſy to plant " them; the beſt method will be, to get a quantity of the plants, juſt as their ſeeds are ripening, and throw " them on the ſurface of the water, where they are deſigned to grow, and their ſeeds will ripen and fall to the " bottom, where they will take root and produce a ſufficiency of theſe plants." MILLER's *Gard. Dict.*

The leaves of the Water creſs have a moderately pungent taſte, and when rubbed between the fingers, emit a quick penetrating ſmell, like that of muſtard ſeed, but much weaker. Their pungent matter is taken up both by watery and ſpirituous menſtrua, and accompany the aqueous juice, which iſſues copiouſly on expreſſion; it is very volatile, ſo as to riſe in great part in diſtillation with rectified ſpirit as well as with water, and almoſt totally to exhale in drying the leaves, or inſpiſſating by the gentleſt heat, to the conſiſtence of an extract, either the expreſſed juice, or the watery or ſpirituous tinctures. Both the inſpiſſated juice and the watery extract, diſcover to the taſte a ſaline impregnation, and, in keeping, throw up cryſtalline efflorescences to the ſurface. On diſtilling with water conſiderable quantities of the herb, a ſmall proportion of a ſubtle, volatile, and very pungent eſſential oil is obtained.

This herb is one of the milder acrid aperient antiſcorbutics, of the ſame general virtues with the Cochlearia, but conſiderably leſs pungent, and, in a great meaſure, free from the peculiar flavour which accompanies that plant. HOFFMAN has a great opinion of it, and recommends it as of ſingular efficacy for ſtrengthening the viſcera, opening obſtructions of the glands, promoting the fluid ſecretions, and purifying the body of humours: for theſe purpoſes, the herb may be uſed as a dietetic article, or the expreſſed juice, taken in doſes of from one to four ounces twice or thrice a day. LEWIS's *Materia Medica.*

THLASPI ARVENSE. PENNY-CRESS.

THLASPI *Lin. Gen. Pl.* TETRADYNAMIA SILICULOSA.

Silicula emarginata, obcordata, polyſperma, valvulis navicularibus, marginato-carinatis.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

THLASPI *arvenſe* ſiliculis orbiculatis, foliis oblongis dentatis glabris. *Lin. Syſt. Veget. ed.* 14. *p.* 587. *Spec. Pl.* 901. *Fl. Suec.* 574.

NASTURTIUM ſiliquis orbiculatis, planis, foliis oblongis, dentatis, glabris. *Hall. Hiſt.* 511.

THLASPI *arvenſe*. *Scop. Fl. Carn. n.* 810.

THLASPI arvenſe ſiliquis latis. *Bauh. p.* 105.

THLASPI Dioſcoridis. *Ger. emac.* 262. Drabæ folio. *Park.* 836. *Raii Syn.* 305. Treacle-Muſtard. Penny-Creſs. *Hudſ. Fl. Angl.* 281. *Lightfoot Fl. Scot.* 340.

RADIX annua, fuſiformis, ſubramoſa, lignoſa, albida.
CAULIS pedalis et ultra, erectus, multangulus, teretiuſculus, ſuperne ramoſus, ramis paucis, caule brevioribus, erectis, ſubarcuatis.

FOLIA alterna, oblonga, obtuſiuſcula, remote dentata, dentibus apice albidis, baſi ſagittata, ſupra viridia, ſubtus glauceſcentia.

FLORES racemoſi, parvi.
PEDUNCULI alterni, fere horizontales, uniflori.

CALYX: PERIANTHIUM tetraphyllum; foliolis ovatis, concavis, acutiuſculis, margine alba, membranacea, *fig.* 1.
COROLLA: PETALA 4, calyce duplo longiora, retuſa, alba, *fig.* 2. auct. *fig.* 3.

STAMINA: FILAMENTA ſex, ſubulata, albida, duo breviora, ANTHERÆ flavæ, minutæ, *fig.* 4. auct. *fig.* 6.
PISTILLUM: GERMEN rotundatum; STYLUS breviſſimus; STIGMA obtuſum, *fig.* 5. auct. *fig.* 7.
PERICARPIUM: SILICULA pedunculi longitudine, latiſſima, orbicularis, profunde emarginata, medio utrinque convexiuſcula, ad latera alata, compreſſa, bilocularis, *fig.* 8, 10.

SEMINA utrinque 4 ad 9, ſub-compreſſa, ſuborbicularia, parallele lineata, glabra, rufa, *fig.* 12.

DISSEPIMENTUM lanceolatum, acutum, *fig.* 11.
VALVULÆ naviculares, *fig.* 9.

ROOT annual, tapering, ſomewhat branched, woody, and whitiſh.
STALK a foot or more in height, upright, multangular, roundiſh, above branched, the branches few, ſhorter than the ſtalk, upright, bending a little inwards.
LEAVES alternate, oblong, a little blunt, diſtantly toothed, the teeth whitiſh at the tip; arrow-ſhaped at the baſe, above green, beneath ſomewhat glaucous.
FLOWERS ſmall, growing in racemi.
FLOWER-STALKS alternate, nearly horizontal, one-flower'd.
CALYX: a PERIANTHIUM of four leaves, the leaves ovate, concave, ſomewhat pointed, the edge white, and membranous, *fig.* 1.
COROLLA: 4 PETALS, twice the length of the calyx, very ſlightly notched at the end, and white, *fig.* 2. magnified, *fig.* 3.
STAMINA: Six FILAMENTS, tapering, whitiſh, two ſhorter than the reſt; ANTHERÆ yellow and minute; *fig.* 4. magn. *fig.* 6.
PISTILLUM: GERMEN rounded; STYLE very ſhort; STIGMA obtuſe, *fig.* 5. magn. *fig.* 7.
SEED-VESSEL: a SILICULE the length of the flower-ſtalk, very broad, orbicular, deeply notched, a little convex in the middle on each ſide, the ſides winged and flat, bilocular, *fig.* 8, 10.
SEEDS in each cell from 4 to 9, ſomewhat flattened, and orbicular, marked with parallel lines, ſmooth, of a reddiſh brown colour, *fig.* 12.
PARTITION lanceolate, pointed, *fig.* 11.
VALVES boat-ſhaped, *fig.* 9.

The *Thlaſpi arvenſe* is ſcarcely entitled to a place in the *Flora Londinenſis*, as we have only ſeen a few accidental plants of it growing near the *Spaniards, Hampſtead-Heath.*

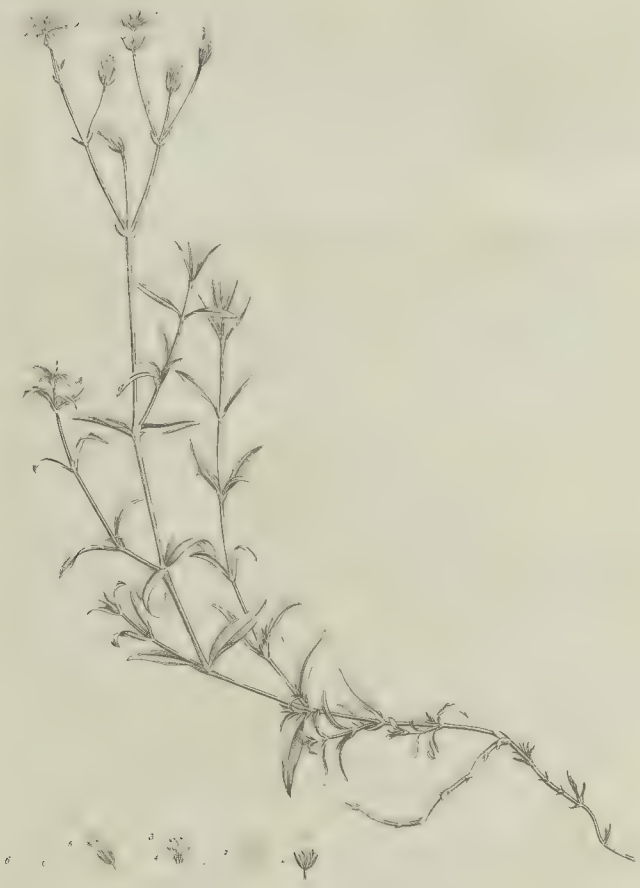
RAY informs us, that it is found in the fields about *Wormingford* in *Eſſex* plentifully, as alſo at *St. Oſyth* in *Tendring* Hundred, at *Stone* in *Staffordſhire*, and *Saxmundham* in *Suffolk*; to theſe habitats we may add, on the authority of Dr. GOODENOUGH, *Broughton Pogges* in *Oxfordſhire*, in the corn fields near which it is found in abundance.

It flowers the beginning of *June*, and the ſeeds are ripe by the end of the month; hence they are not liable to mix and be ground with our corn, to the flower of which they might communicate the taſte of garlic, which the plant is ſaid to give to the milk of ſuch cattle as feed on it.

It is obviouſly diſtinguiſhed, as RAY has obſerved, from all our plants of the ſame genus, by its ſmoothneſs, and large flat round pods, whence it has very properly been called *Penny-creſs*: HALLER judiciouſly obſerves, that the true ſeed-veſſel is in the centre, and that it owes its extraordinary breadth to winged appendages, which TOURNEFORT has admirably well expreſſed.

The ſeeds are ſaid to produce twice as much oil as linſeed.

This ſpecies and the *Thlaſpi Campeſtre* are uſed indiſcriminately in medicine; the ſeeds, more eſpecially thoſe of the preſent plant, have an acrid biting taſte, approaching to that of the common muſtard, with which they agree nearly in their pharmaceutical properties, their pungent matter being totally extracted by water, only partially by rectified ſpirit, and being elevated by water in diſtillation. They have joined to their acrimony an unpleaſant flavour, ſomewhat of the garlic or onion kind, and this they give out to ſpirituous as well as watery menſtrua; they are rarely made uſe of any otherwiſe than as ingredients in the compoſitions whoſe names they bear, though ſome recommend them in different diſeaſes preferably to the common muſtard. *Lewis M. Med.* 647.



Cerastium arvense.

CERASTIUM ARVENSE. CORN CERASTIUM or MOUSE-EAR CHICKWEED.

CERASTIUM *Lin. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* bifida. *Capſ.* unilocularis apice dehiſcens.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *arvenſe* foliis lineari-lanceolatis, obtuſis, glabris; corollis calyce majoribus. *Lin. Syſt. Vegetab. p.* 436. *Sp. Pl. p.* 628. *Fl. Suec. n.* 417.

MYOSOTIS foliis linearibus, lanceolatis, petalis calyce duplo longioribus. *Hall. Hiſt.* 889.

MYOSOTIS arvenſis hirſuta flore majore. *Vaill. Paris.* 141. *t.* 30. *f.* 4.

CENTUNCULUS arvenſis hirſutus flore majore. *Bauh. Pin.* 210. *Raii Syn.* 348, Long-leav'd rough Chickweed with a large flower.

CARYOPHYLLUS holoſteus. *Ger. emac.* 595. arvenſis hirſutus. *Parkinſ.* 1339. *Hudſ. Fl. Angl. ed.* 2. *p.* 201. *Lightfoot Fl. Scot. p.* 241.

RADIX perennis, filamentoſo-fibroſa, repens.

CAULES *ſteriles* plurimi, palmares et ultra, laxe ceſpitoſi, inferne proſtrati, ſæpius repentes, poſtea erecti, baſi ſubramoſi, deorſum piloſi; caulis florifer ſæpe duplo altior, validior; ſtrictus, ſuperne ramoſus, pilis minutis, horizontalibus, glandulofis ſubviſcoſus, omnes teretes, geniculati, ad geniculos ſenſim ſubincraſſati.

FOLIA ſaturate viridia, ſeſſilia, oppoſita, ſubconnata, patentia, ſubreflexa, lineari lanceolata, acutiuſcula, ſupra piloſiuſcula, pilis ſurſum ſpectantibus, ſubtus lævia, margine ciliata, ciliis recurvis.

PEDUNCULI e dichotomia caulis, ſolitarii, binati, ternati, erecti, uniflori; *ſtipulis* binis, oppoſitis, ovatis, acutis, concavis, margine membranaceis.

FLORES albi, terminales, erecti, magni.

CALYX: PERIANTHIUM pentaphyllum, perſiſtens foliolis lanceolatis, acutis, ſubconcavis, piloſiuſculis, margine membranaceis, *fig.* 1.

COROLLA: PETALA 5, cordiformia, patentia, verſus marginem parum reflexa, ad medium fere bifida, tenera, alba, lineis hyalinis radiatim ſtriata, calyce duplo longiora, *fig.* 2.

STAMINA: FILAMENTA decem, filiformi-ſubulata, corolla breviora, alterna breviora; ANTHERÆ ovales, luteæ, *fig.* 3.

PISTILLUM: GERMEN globoſum; STYLI quinque, capillares, ſubreflexi; STIGMATA obtuſa, *fig.* 4.

PERICARPIUM: CAPSULA ovato-cylindracea, calyce longior, ore decemdentato, *fig.* 5.

SEMINA plurima, rufeſcentia, *fig.* 6.

ROOT perennial, with thready fibres, creeping.

STALKS which *bear no flowers*, numerous, a hand's-breadth or more in length, forming a kind of looſe turf, below proſtrate and moſtly creeping, afterwards upright, ſomewhat branched at the baſe, hairy, hairs turned downward, the flowering ſtem often twice as high, ſtronger, ſtraight, branched above, ſomewhat viſcid with minute glandular hairs, both kinds round, jointed, thickened gradually towards the joints.

LEAVES deep green, ſeſſile, oppoſite, ſomewhat united at bottom, ſpreading, frequently turned back, betwixt linear and lanceolate, rather pointed, hairy on the upper ſide, hairs pointing upwards, on the under ſide ſmooth, edge fringed with hairs crooked backwards.

FLOWER-STALKS from the forking of the ſtalk, growing ſingly, or divided into two's or three's, upright, one-flowered, *ſtipulæ* in pairs, oppoſite, ovate, acute, concave, membranous on the edge.

FLOWERS white, terminal, upright, and large.

CALYX: a PERIANTHIUM of five leaves, permanent, lanceolate, pointed, a little hollow, ſomewhat hairy and membranous on the edge, *fig.* 1.

COROLLA: 5 PETALS, heart-ſhaped, ſpreading, turned back a little towards the edge, divided almoſt to the middle into two ſegments, tender, white, ſtriated with tranſparent lines in the form of rays, twice the length of the Calyx, *fig.* 2.

STAMINA: ten FILAMENTS, ſlightly tapering, ſhorter than the corolla, the alternate ones ſhorteſt; ANTHERÆ oval and yellow, *fig.* 3.

PISTILLUM: GERMEN globular; STYLES five, very ſlender and ſomewhat reflexed; STIGMATA blunt, *fig.* 4.

SEED-VESSEL: a CAPSULE betwixt ovate and cylindrical, longer than the calyx, the mouth having ten teeth, *fig.* 5.

SEEDS numerous, reddiſh brown, *fig.* 6.

A rare plant in the neighbourhood of *London*, not uncommon about *Croydon*, and very plentiful about *Bury* in *Suffolk*; affects dry ſituations; is found on ſand banks, walls, and in corn-fields; flowers with us early in *June*.

Is diſtinguiſhed from all the other *Ceraſtiums* growing with us, by its large flowers, deep green leaves, which appear ſmooth at a diſtance, and powerfully creeping roots and ſtalks.

A few roots of this ſpecies planted on a bank in my garden, *Lambeth-Marſh*, covered with ſtones in imitation of rock-work, ſoon increaſed ſo as wholly to overſpread a great part of it, and in a few years penetrating through to the north ſide of the bank, ſupplanted the *Saxifraga hypnoides*, with a fine coat of which it was on that ſide thickly covered.—We have ſeen it penetrate the mortar of a brick wall, and have found that there is ſcarcely a plant of its ſize it will not overcome. We mention theſe circumſtances, not only as they tend to illuſtrate a part of the oeconomy of the plant, but that perſons may be on their guard how they introduce it, or ſuch like encroaching plants, on any kind of rock-work they do not wiſh them wholly to cover.

It varies in the ſmoothneſs of its leaves.

CARDUUS PALUSTRIS. MARSH THISTLE.

CARDUUS *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Cal. ovatus, imbricatus, squamis spinosis. *Recept.* pilosum.

Raii Syn. Gen. 9. HERBÆ FLORE EX FLOSCULIS FISTULARIBUS COMPOSITO SIVE CAPITATÆ.

CARDUUS *palustris* foliis decurrentibus dentatis: margine spinosis, floribus racemosis erectis, pedunculis inermibus. *Lin. Syst. Vegetab. p.* 724. *Sp. Pl.* 1151. *Fl. Suec. n.* 720.

CIRSIUM caule recto subnudo alato, foliis semipinnatis spinosis, calycibus molliter spinosis. *Haller Hist. n.* 170.

CIRSIUM *palustre*. *Scopoli Fl. Carn. n.* 1004.

CARDUUS palustris. *Bauh. Pin.* 377. *Parkinf.* 983. *Raii Synop. p.* 194. Marsh-Thistle. *Hudson Fl. Angl. ed.* 2. *p.* 352. *Lightfoot Fl. Scot. p.* 453.

RADIX biennis.

CAULIS quadripedalis, et ultra, erectus, ramosus, multangulus, pilis crebris longis albis hirsutus, alatus, spinosus, longitudinaliter viridi et purpureo variegatus.

FOLIA sessilia, deflexa, lanceolata, acuta, lacerato-dentata, laciniis horizontalibus, oppositis, dentibusque latis, obtusiusculis, dente infimo cujusque laciniæ crispato, elevato, venosa, pilis remotioribus hirsuta, supra obscure viridia, subtus glauca, costa pallide virescenti, subtus hirsutissima, margine spinoso, spinis basi purpurascentibus, apice albis, folia caulina suprema apice linearia, elongata.

Foliorum rudimenta spinosa ad caulem quinque et sexfariam interrupta, decurrentia, eum alatum, spinosum reddunt.

FLORES in summitate caulis ramorumque congesti, sessiles, violacei.

CALYX ventricosus, subovatus, lævis, sublanuginosus, arcte imbricatus, squamis ovatis, convexis, viridibus aut purpurascentibus, mucrone divergente purpureo terminatis, *fig.* 1. *auct.* sub mucrone linea prominula nitida notatis, *fig.* 2.

COROLLA composita, tubulosa, uniformis, calyce duplo longior; *Corollulæ* hermaphroditæ, subæquales, reflexæ; *Corolla* propria monopetala, infundibuliformis, *tubo* tenuissimo, albescenti; *limbo* erecto, basi ovato, quinquefido, violaceo, laciniis linearibus, æqualibus, unica profundius separata, *fig.* 3.

STAMINA: FILAMENTA quinque, capillaria; ANTHERA cylindracea, tubulosa, corolla paulo longior violacea.

PISTILLUM: GERMEN ovatum; STYLUS filiformis, staminibus longior, pallide violaceus; STIGMA simplex, subulatum, nudum, *fig.* 4.

SEMINA obovata, obsolete angulata, hinc convexa, inde parum concava, albida, nitida, *fig.* 5.

PAPPUS sessilis, plumosus, *fig.* 6.

RECEPTACULUM pilosum, planum.

ROOT biennial.

STALK four feet or more in height, upright, branched, multangular, hirsute with numerous long white hairs, winged, spinous, variegated longitudinally with green and purple.

LEAVES sessile, bent downwards, lanceolate, pointed, jaggedly toothed, segments horizontal, opposite, together with the teeth broad and somewhat blunt, the lowermost tooth of each segment crisp'd and elevated, veiny, hirsute with hairs standing remotely, above of a deep green colour, glaucous on the under side, the mid-rib of a pale green colour, and extremely hairy underneath, the margin of the leaf spinous, the spines purplish at the base and white at the extremity, the uppermost stalk-leaves elongated and linear at the extremity.

Five or six rows of spinous rudiments of leaves running interruptedly down the stalk, render it winged and spinous.

FLOWERS of a violet colour, sessile, in clusters on the top of the stalk and branches.

CALYX ventricose, somewhat ovate, smooth, a little woolly, scales lying closely one over the other, ovate, convex, green or purplish, terminated by a purple diverging mucro or point, *fig.* 1. *magn.* beneath which is a glossy linear prominence, *fig.* 2.

COROLLA compound, tubular, uniform, twice as long as the calyx; *Florets* hermaphrodite, nearly equal, turned back, each single *Floret* monopetalous, funnel-shaped, the *tube* very slender, whitish; the *limb* upright, ovate at the base, divided into five segments, which are of a violet colour, linear, equal, one more deeply separated than the rest, very slender, *fig.* 3.

STAMINA: five FILAMENTS; ANTHERÆ forming a cylindrical tube, longer than the corolla, of a violet colour.

PISTILLUM: GERMEN ovate; STYLE filiform, longer than the stamina, of a pale violet colour; STIGMA simple, tapering, and naked, *fig.* 4.

SEEDS inversely ovate, faintly angular, on one side convex, on the other a little concave, whitish, and shining, *fig.* 5.

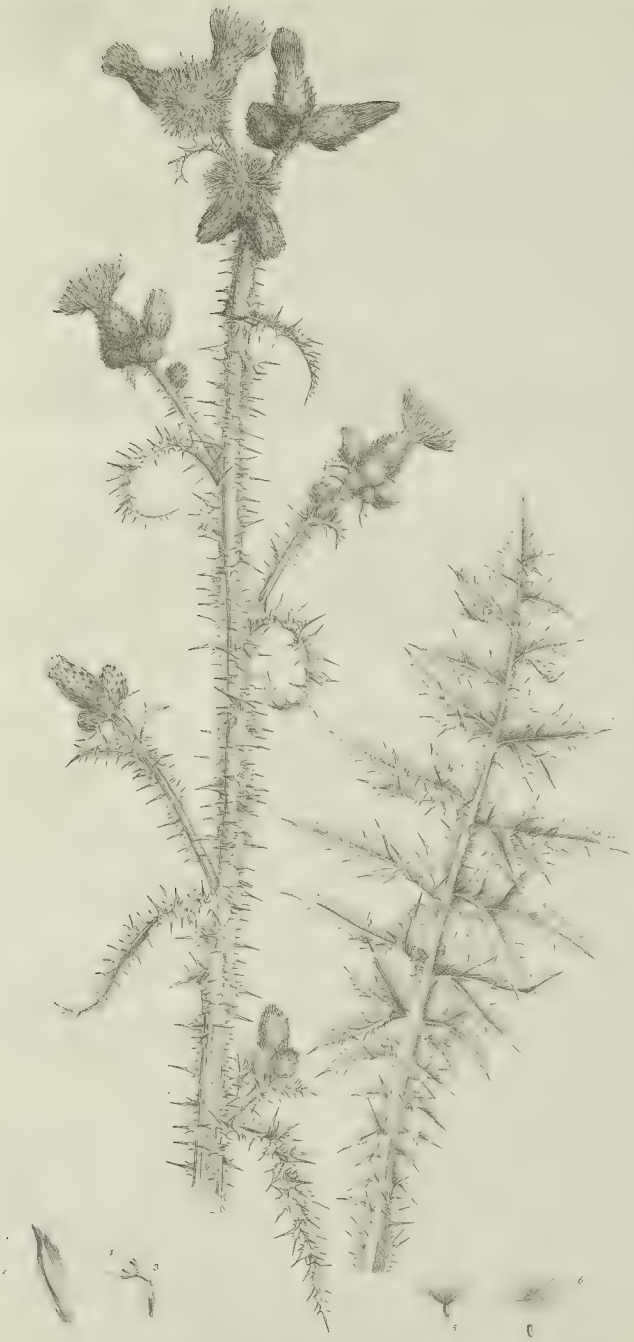
DOWN sessile and feathery, *fig.* 6.

RECEPTACLE hairy and flat.

On moist heaths and commons, in wet meadows, marshes, and the boggy parts of woods, the *Carduus palustris* is a very common, as well as a very troublesome plant; in the latter situation it frequently grows to the height of ten or twelve feet, and in some very favourable spots of this sort, acquires a height which we believe no other *British* herbaceous plant ever attains to.

As it is a biennial, there is no great difficulty attends its extirpation—was the husbandman as careful to weed the noxious plants from his pastures as from his corn-fields, they would soon wear a more pleasing aspect.

As it is never found but in the situations above mentioned, it is not likely to be mistaken for any other Thistle; it has usually more purple about it than the rest of its kindred, and varies as many of the others do strictly harmless.



Carduus palustris.

Stellaria aboriginea

STELLARIA ULIGINOSA. BOG STICHWORT.

STELLARIA *Lin. Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. 5-phyllus, patens. *Petala* 5 bipartita. *Capſ.* 1-locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

STELLARIA *uliginoſa* foliis ovato-lanceolatis apice callofis, floribus ſubpaniculatis lateralibus, petalis calyce brevioribus.

STELLARIA *graminea* var. γ. *Lin. Fl. Suec. n.* 393. *Hudſ. Fl. Angl. ed.* 2. *p.* 190.

STELLARIA *uliginoſa. Schreb. Spic.*

ALSINE foliis ellipticis, acuminatis; petalis bipartitis. *Hall. Enum. p.* 385. *Boehm. Lipſ. p.* 153. *n.* 374. Alſine foliis lanceolatis, petalis bipartitis; petiolis unifloris. *Hall. Hiſt. n.* 881.

STELLARIA *(hypericifolia)* foliis ovato-lanceolatis, integerrimis; pedunculis ſolitariis. *Wiggers Prim. Holſ. p.* 34. *n.* 364. Alſine Hyperici folio. *Vaill. Par. p.* 9.

STELLARIA *(aquatica)* foliis lanceolatis; petalis bipartitis, calycem longitudine æquantibus. *Pollich. Pal. p.* 429. *n.* 442.

STELLARIA *(Dilleniana)* foliis lanceolatis integerrimis, caule procumbente. *Leers Herborn. p.* 107. *n.* 331.

ALSINE aquatica folio gratiolæ flore ſtellato. *Dill. Catal. Giſs.* 38 *et App.* 39.

ALSINE aquatica media. *Bauh. Pin.* 251.

ALSINE fontana. *Tabern. icon.* 712.

ALSINE longifolia uliginoſis proveniens locis, *J. B.* III. 365. *Raii Syn. p.* 347. Long-leav'd Water Chickweed.

RADIX annua, fibrilloſa, terræ arcte inhærens.

CAULES plures, palmares ad pedales, diffuſi, decumbentes, tetragoni, læves, tenues, flaccidi, diſrupti filoſi, parum ramoſi.

RAMI tenuiſſimi, ſurculiformes, ſparſi, nonnunquam apice floriferi.

FOLIA oppoſita, ſeſſilia, connata, ultra ſemunciam longa, duas treſve lineas lata, ſubſecunda, ſubconniventia, ovato-lanceolata, acuta, baſi ciliata, apice fuſco calloſa, ad latera ſubruflexa, tenera, lævia, pallide viridia.

FLORES laterales, raro terminales, pedunculati, parvi, albi, diametro duarum linearum.

PEDUNCULI ex axillis foliorum, ſolitarii, bini, terni, ſimplices aut compoſiti, ut plures pedicelli ex uno pedunculo communi egrediantur, ſemipollicares ad pollicares, ſuperne incraſſati, florigeri erecti, fructigeri deflexi, bracteis duabus, lanceolato-ſetaceis, membranaceis, albidis ad baſin et diviſiones inſtructi.

CALYX: PERIANTHIUM perſiſtens, pentaphyllum, laciniis patentibus, lanceolatis, acutis, lævibus, viridibus, triis ſtriis obſolete lineatis, *fig.* 1.

COROLLA: PETALA quinque, calyce breviora, approximata, laciniis calycinis incumbentia, ſtellatim expanſa, ad baſin uſque bipartita, laciniis divaricatis, obovatis, albis, *fig.* 2.

STAMINA: FILAMENTA 10, ſubulata, alba, alterna breviora; ANTHERÆ ſubrotundæ, flaveſcentes, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, glandulis quinque cinctum; STYLI tres, capillares, patentes, STIGMATA obtuſa, alba, *fig.* 4.

PERICARPIUM: CAPSULA ovata, unilocularis, ſexvalvis, *fig.* 5.

SEMINA plurima, minuta, ſubrotunda, compreſſa, rugoſa, ruſa, *fig.* 6.

ROOT annual, finely fibred, ſticking ſtrongly to the earth.

STALKS numerous, from a hands-breadth to a foot in length, looſely ſpread, decumbent, four-cornered, ſmooth, ſlender, weak, when broken aſunder ſtringy, a little branched.

BRANCHES very ſlender, ſhoot-like, placed irregularly on the ſtalk, ſometimes flowering at top.

LEAVES oppoſite, ſeſſile, united at bottom, above half an inch in length and two or three lines in breadth, frequently growing to one ſide of the ſtalk, and bending towards each other ſo as almoſt to touch at the points, ovato-lanceolate, pointed, fringed at the baſe, tips brown and callous, turned back a little at the ſides, tender, ſmooth, and of a pale green colour.

FLOWERS lateral, ſeldom terminal, ſtanding on footſtalks, ſmall, white, about two lines in diameter.

FLOWER-STALKS proceeding from the boſoms of the leaves, ſingly, or in two's and three's, ſimple or compound, ſeveral partial flower-ſtalks proceeding from one common peduncle, half an inch to an inch in length, thickened above, the flower-bearing ones upright, the fruit-bearing ones turned downwards, furniſhed with two very minute, pointed, membranous whitiſh floral leaves at the baſe and diviſions.

CALYX: a PERIANTHIUM of five leaves, permanent, the ſegments ſpreading, lanceolate, pointed, ſmooth, green, marked with three lines faintly prominent, *fig.* 1.

COROLLA: five PETALS ſhorter than the Calyx, approximating, lying on the ſegments of the Calyx, expanded in a ſtar-like form, divided quite to the baſe, the ſegments ſpreading wide aſunder, inverſely ovate and white, *fig.* 2.

STAMINA: ten FILAMENTS, tapering, white, the alternate ones ſhorteſt; ANTHERÆ nearly round and yellowiſh, *fig.* 3.

PISTILLUM: GERMEN roundiſh, ſurrounded by five glands; STYLES three, very fine, and ſpreading; STIGMATA obtuſe and white, *fig.* 4.

SEED-VESSEL: an ovate CAPSULE, of one cavity, and ſix valves, *fig.* 5.

SEEDS numerous, minute, roundiſh, flattened, wrinkled, of a reddiſh brown colour, *fig.* 6.

Moſt

Moſt of the old Botaniſts regarded this plant as a diſtinct ſpecies, and the obſervations of the moderns have ſhewn that their opinion was well founded; they conſidered it indeed as an *Alſine*, and this alſo was a further proof of their diſcernment, for the *Alſine media* and our plant are undoubtedly of the ſame genus, inaſmuch as they agree exactly in the parts of fructification, number of ſtamina excepted, and that is found to vary in the *Alſine media*: the *Ceraſtrum ſemidecandrum* is admitted to be of the ſame genus as the others, though it has only five ſtamina; the *Alſine* therefore ſhould be removed to *Stellaria*, and called *Stellaria Alſine*; the *Ceraſtium aquaticum* ought alſo to be placed with them, as it agrees better with the character of a *Stellaria*, than a *Ceraſtium*, eſpecially in its ſeed veſſel, a part which is of the firſt conſequence in determining the genus, and which LINNÆUS has not ſufficiently attended to.

LINNÆUS, in general too cautious in making ſpecies, conſiders our plant as a variety of *Stellaria graminea*; but as it differs from that plant in ſo many eſſential points, we conclude he never had an opportunity of fairly examining and contraſting the two in a living ſtate: DILLENIUS has minutely deſcribed it, eſpecially the flowers, but neither he or any other author that we are acquainted with, has noticed the callous tips of the leaves, though very conſpicuous, nor the particular ſituation of the leaves reſpecting the ſtalk and each other, (ſee the deſcription.) DODDY, as appears from RAY's *Synopſis*, had the merit of obſerving that the flowers were produced ex alis foliorum, which is certainly one of the moſt ſtriking characters of the ſpecies, but this is not produced in the common way; the fact is, the flowers would be terminal, did not a new kind of ſhoot or furculus, rather than a continuation of the ſtem, proceed from the panicle.

The petals being ſo deeply divided, and ſpreading ſo far aſunder, has occaſioned ſome miſtakes in the deſcriptions which authors have given of the flowers: J. BAUHINE deſcribes them with ten petals; VAILLANT on the contrary, with five, and thoſe undivided; this author, aſſuming to himſelf a ſuperior degree of diſcernment, complains that MORISON and RAY had deſcribed them as divided almoſt to the baſe; a more minute inſpection would have taught him that they were not ſuch ſuperficial obſervers as he imagined.

It is a very common plant in wet ſpringy meadows, and eſpecially on the edges of the ditches, which interſect ſuch meadows, but cannot be ſaid to be truly a bog plant, like *Anagallis tenella*, or *Droſera*.

It flowers from *June* to *Auguſt*.

CAUCALIS INFESTA. CORN CAUCALIS.

CAUCALIS *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Cor. radiatæ; diſci maſculæ. *Petala* inflexo-marginata. *Fructus* ſetis hiſpidus. *Involucra* integra.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

CAUCALIS *arvenſis* involucro univerſali monophyllo, umbella conferta, ſeminibus rotundato-ovatis, foliolis ovato-lanceolatis, pinnatifidis, ramis divaricatis. *Huds. Fl. Angl. ed.* 2. *p.* 113.

SCANDIX infeſta ſemine exteriore hiſpido, umbellulis confertiſſimis hemiſphæricis. *Lin. Syſt. Veg. p.* 237. *Jacq. Fl. Auſtr. t.* 46.

CAUCALIS foliis duplicato-pinnatis, pinnulis longe confluentibus. *Hall. Hiſt.* 742.

CAUCALIS ſegetum minor Anthriſco hiſpido ſimilis. *Raii Syn. p.* 20. *Hiſt. Pl. p.* 468. Small Corn-Parſley.

CAUCALIS pumila ſegetum Goodyero. *Ger. emac.*

RADIX annua, fuſiformis, tenuis, ſublignoſa, albida.

CAULIS ſolitarius, ſemipedalis ad bipedalem, prope baſin in ramos patentes, longos diviſus, parum flexuoſus, teres, inferne glaber, ſubrubens, ſuperne ſcabriuſculus, ſtriatus, viridis.

FOLIA alterna, ſeſſilia, remotiuſcula, patentia, apice parum deflexa, petiolata, pinnata, pilis minutis albis utrinque hirſutula, ſordide viridia, pleraque demum purpurea; *Foliola* ſeu pinnæ tres, ad ſeptem, oppoſitæ, circumſcriptione ovatæ, aut ovato-lanceolatæ, extima longiſſima, pinnatifidæ, laciniis lanceolatis, acutis: infimæ petiolatæ, remotiores, ceteræ ſeſſiles, ſuperiores confluentes.

FLORES in umbellis, parvi, albi, inodori.

CALYX: UMBELLA *univerſalis*, inæqualis, radiis tribus ad novem.

——— *partialis* inæqualis, conferta, convexa, radiis pluribus, exterioribus quinque longioribus.

INVOLUCRUM *univerſale* ſubmonophyllum, plerumque nullum.

——— *partiale* foliolis ſubquinis, linearifubulatis, appreſſis, hirſutulis, umbellulæ fere longitudine.

PERIANTHIUM proprium, minutum, quinquedentatum.

COROLLA *univerſalis* difformis, radiata; floſculi diſci ſæpe abortivi.

——— *propria* hermaphrodita; PETALIS quinque inflexo-cordatis, inæqualibus, extimo maximo, ceteris gradatim diminutis, *fig.* 1.

STAMINA: FILAMENTA quinque, capillaria; ANTHERÆ parvæ, purpuraſcentes, *fig.* 2.

PISTILLUM: GERMEN oblongum, inferum, hiſpidum, pilis apice rubris, *fig.* 3. STYLI duo, ſubulati, patentes; STIGMATA duo, capitata, *fig.* 4.

FRUCTUS ovato-oblongus, ſtriatus, ſetis rigidis uncinatis hiſpidiſſimus, *fig.* 5.

SEMINA duo, oblonga, hinc convexa, inde plana.

ROOT annual, tapering, ſlender, ſomewhat woody, and whitiſh.

STALK ſingle, from half a foot to two feet high, divided near the baſe into long ſpreading branches, a little crooked, round, ſmooth below, and reddiſh; above roughiſh, ſtriated, and green.

LEAVES alternate, ſeſſile, ſomewhat remote, ſpreading, turned down a little at the tip, ſtanding on footſtalks, pinnated, covered on both ſides with minute white hairs, whence ſlightly hirſute, of a dull green colour, moſt of them finally purple; the *leaflets* or pinnæ from three to ſeven, oppoſite, ovate or ovato-lanceolate, the outermoſt very long, pinnatifid, the ſegments lanceolate, pointed, the lowermoſt ſtanding on footſtalks, and more diſtant than the others, the reſt ſeſſile, the upper ones running together.

FLOWERS growing in umbels, ſmall, white, and ſcentleſs.

CALYX: the *univerſal* UMBEL, unequal, with from three to nine rays.

——— the *partial* UMBEL, unequal, crowded, convex, compoſed of numerous rays, the five outermoſt of which are the longeſt.

INVOLUCRUM: the *general* one, of one leaf, more or leſs, moſt commonly wanting.

——— the *partial* one, compoſed of about five ſmall leaves, very narrow and tapering, appreſt, ſlightly hirſute, almoſt the length of the ſmall umbel.

PERIANTHIUM of each floret very ſmall, with five teeth.

COROLLA: the *univerſal* COROLLA miſhapen, radiated, the florets of the diſk often abortive.

——— the *florets* hermaphrodite, compoſed of five PETALS, inflexo-cordate, unequal, the outermoſt very large, the reſt gradually diminiſhed in ſize, *fig.* 1.

STAMINA: have five capillary FILAMENTS, and ſmall purpliſh ANTHERÆ, *fig.* 2.

PISTILLUM: GERMEN oblong, below the corolla, hiſpid, hairs red at the tips, *fig.* 3. STYLES two, tapering, ſpreading wide; STIGMATA two, each forming a little head, *fig.* 4.

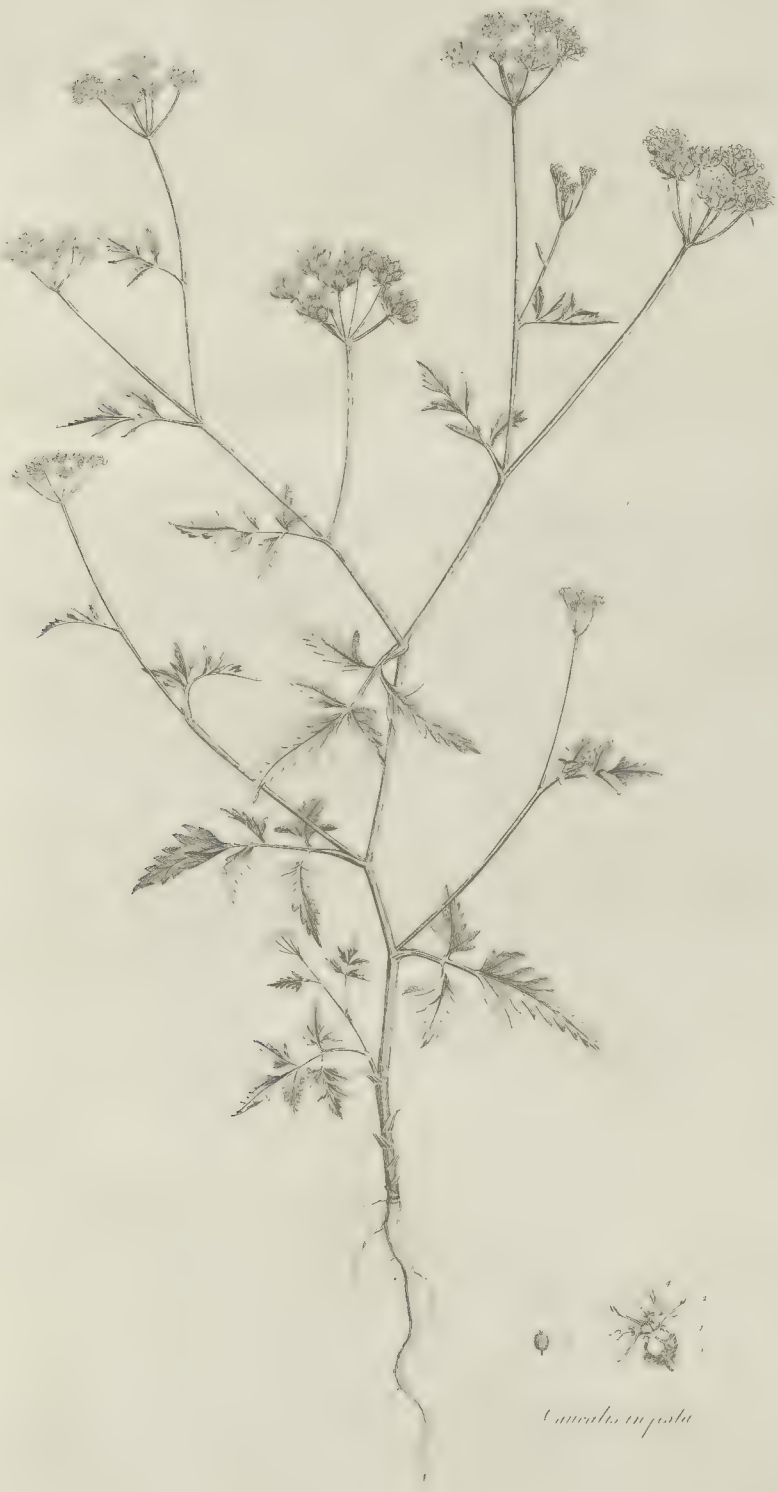
FRUIT ovato-oblong, ſtriated, exceedingly hiſpid, with ſtiff hooked briſtles, *fig.* 5.

SEEDS two, oblong, convex on one ſide, and flat on the other.

Moſt of the ancient Botaniſts confounded this plant with the *Caucalis Anthriſcus*, which they might do without any great diſparagement of their diſcernment: Mr. GOODYER, of *Hampſhire*, the friend of old GERARD, and often mentioned by him with reſpect, appears firſt to have noticed it; RAY afterwards deſcribes it with great accuracy.

Though the plant appears now to be well known, Botaniſts differ as to the genus to which it ſhould be referred: LINNÆUS in his *Syſtema Naturæ* has conſidered it as a *Scandix*, and JACQUIN in his accurate and elegant work has followed him; BARON HALLER, on the contrary, ranks itas a *Caucalis*, and Mr. HUDSON, in our humble opinion with great propriety, coincides with him in opinion; for we apprehend it will generally be allowed that in the umbelliferous plants, a character taken from the ſeed is more to be depended on than one drawn from the involucrum;—we have therefore taken Mr. HUDSON's ſpecific deſcription, but that we might differ as little as poſſible from LINNÆUS, we have changed the generic name only.

The term *infeſta* has been applied to this plant, from its being a very common and bad weed in corn-fields, to which it is not altogether confined, being ſometimes found by the ſides of hedges and among rubbiſh: we meet with it frequently in *Batterſea* fields, where it flowers from *June* to *Auguſt*.—The ſeeds when ripe adhere to one's clothes.



Conocarpus erecta

Salix triandra

SALIX TRIANDRA. THREE-THREADED WILLOW.

SALIX *Lin. Gen. Pl.* DIOECIA DIANDRIA.

MASC. *Amenti* ſquamæ. *Cor.* o. *Glandula* baſeos neƈtarifera.

FŒM. *Amenti* ſquamæ. *Cor.* o. *Stylus* 2-fidus. *Capſ.* 1-locularis; 2-valvis. *Sem.* pappoſa.

Raii Syn. Gen. ARBORES ET FRUTICES.

SALIX *triandra* foliis ſerratis glabris, floribus triandris. *Lin. Syſt. Vegetab.* p. 879. *Sp. Pl. p.* 1442.

SALIX foliis glabris, elliptico-lanceolatis, ſerratis; ſtipulis dentatis; julis gracilibus triandris. *Hall. Hiſt. n.* 1637.

SALIX *triandra. Scopoli Fl. Carn. ed.* 2. *p.* 259.

SALIX folio amygdalino utrinque virente aurito. *Bauh. Pin.* 473.

SALIX folio amygdalino utrinque aurito corticem abjiciens. Almond-Leaved Willow that caſts its Bark. *Raii Syn. ed.* 3. *p.* 448.

SALIX folio auriculato ſplendente flexilis. *Raii Syn. ed.* 3. *p.* 448. The round-ear'd Shining Willow. *Hudſ. Fl. Angl. ed.* 2. *p.* 425.

FRUTEX orgyalis et ultra, in arbuſculum mediocrem nonnunquam exſurgens, corticem quotannis abjiciens, undique ramoſus.

RAMI erecti, ſubvirgati, teretes, verſus ſummitates angulati, profunde ſulcati, tenaces, flexiles aut etiam fragiles preſertim ad genicula, cortice e cinereo aut fuſco virescente aut flaveſcente, folioſi.

FOLIA alterna, longitudine tripollicaria, latitudine fere pollicaria, in ramis junioribus triplo majora, lanceolata, acuta, ſerrata, ſerraturis cartilagineis, prominentibus, glabra, nitentia, ſupra ſaturate viridia, ſubtus pallidiora, nervo medio albido, prominulo, baſi glandulis aliquot ſæpius occupata, petiolata, petiolo ſemunciali, canaliculato.

STIPULÆ in quibuſdam ramis nullæ, in pleriſque binæ ad baſin petioli, auriformes, rugoſæ, crenulatæ, ſuperne glanduloſæ.

AMENTA *maſcula* numeroſa, ante antheſin longitudine fere pollicaria, ſubcylindracea, tomento ſericeo obducta, luteſcente-viridia, odorata, poſt pollinis emiſſionem longitudine bipollicaria et ultra: foliola quinque lanceolata, utrinque nitentia, piloſa, ſubtus pallidiora ad baſin cujuſvis amenti.

SQUAMA ad baſin ſinguli floris pallide viridis, parum rugoſa, margine apiceque piloſa, *fig.* 1.

STAMINA: FILAMENTA plerumque tria, ſub pollinis emiſſione ſquamâ duplo longiora; ANTHERÆ ſubrotundæ, biloculares, luteſcentes, *fig.* 2.

NECTARIUM: *Glandula* minuta, truncata, ad germinis baſin, *fig.* 3.

AMENTA *fœminea* numero et longitudine maſculis ſimilia, illis viridiora et minus ſpectabilia.

SQUAMÆ obtuſæ, rugoſæ, luteſcentes, ſub floreſcentia ad dimidiam germinis altitudinem attingentes, *fig.* 4.

GERMEN oblongum, acuminatum, *fig.* 5.

STIGMATA duo, brevia, obtuſa, horizontalia, bifida, *fig.* 6.

A SHRUB ſix feet or more in height, ſometimes growing up to a middle-ſized tree, caſting its bark yearly, branched on all ſides.

BRANCHES upright, ſomewhat twiggy, towards the extremity angular or deeply grooved, tough, flexible, or even brittle, eſpecially at the joints, covered with an aſh-coloured, brownish-green, or yellowiſh bark, thickly ſet with leaves.

LEAVES alternate, three inches in length, and almoſt one in breadth, in the younger branches thrice as large, lanceolate, pointed and ſerrated, the ſerratures or teeth cartilaginous and prominent, ſmooth, gloſſy, of a deep green colour above and pale beneath, the midrib whitiſh, and ſomewhat prominent, moſt commonly beſet with ſome glands at the baſe, ſtanding on footſtalks, half an inch in length, ſcooped.

STIPULÆ in ſome of the branches none, but in moſt a pair at the baſe of the leaf-ſtalk, ear-ſhaped, wrinkled, notched and glandular on the upper ſide.

CATKINS of the *male* plant numerous, before the antheræ put forth almoſt an inch long, nearly cylindrical, covered with a ſilky down, of a yellowiſh green colour; when all the antheræ have ſhed their pollen, they extend two inches or more in length: five ſmall lanceolate leaves, gloſſy on both ſides, hairy and ſomewhat paler on the under ſide, are placed at the baſe of each catkin.

The SCALE at the baſe of each floret, is of an uniform pale green colour, hairy on both edges as well as the tip, and ſomewhat wrinkled, *fig.* 1.

STAMINA: FILAMENTS moſtly three, becoming on the ſhedding of the pollen as long again as the ſcale; ANTHERÆ roundiſh, yellow and bilocular, *fig.* 2.

NECTARY: a minute *Glandule*, truncated, at the baſe of the Germen, *fig.* 3.

CATKINS of the *female*, ſimilar in number and length to thoſe of the male, but greener and leſs ſhewy.

SCALES obtuſe, wrinkled, yellowiſh, when properly in bloſſom extending half way up the germen, *fig.* 4.

GERMEN oblong, tapering, *fig.* 5.

STIGMATA two, ſhort, obtuſe, ſpreading horizontally, and bifid, *fig.* 6.

The

The Willows in general are more diſtinguiſhed for their uſes in rural œconomy, than as ornamental trees or ſhrubs; nevertheleſs, many of them come under the latter deſcription, and with them we may rank the preſent ſpecies, more indeed on account of its flowers than its foliage. When ſuffered to grow, it acquires the ſize of a ſmall tree, and the catkins being unuſually numerous, render the male plant in particular, in which they are of a bright yellow colour, and agreeable ſcent, an object highly pleaſing among other flowering ſhrubs or trees.

In all Willows planted for ornament, the male tree is to be preferred; not only becauſe its catkins are the moſt brilliant, while the foliage is the ſame as that of the female, but becauſe the females, when planted by themſelves, quickly ſhed their catkins, which make a litter.

The leading character of this Willow, when in flower, is its three ſtamina to each floret; now and then indeed two only occur, but not ſufficiently often to deſtroy the excellency of the character: when out of flower, it is diſtinguiſhable by yearly caſting the bark of its trunk when of a certain age (whether every individual does this or not, I am not certain; a tree of this ſpecies in my garden has conſtantly done it for many years); its leaves are more ſtrongly ſerrated than moſt others; the branches in autumn are uſually furniſhed with ſtipulæ, but not always: and they have another character which I have found of great conſequence in determining this ſpecies; towards the top they are angular or grooved, in a greater degree than any other Willow I have examined—it is not uſual for Willows to flower ſpring and autumn, but we have frequently found this ſpecies to do ſo.

In its tree ſtate, it grows ſparingly in the hedges about town; in the oſier grounds it is not uncommon, being cultivated as a Baſket Willow—it flowers the beginning of *May*—the bark has more aſtringency but leſs bitterneſs than the *Salix monandra*, and has been found efficacious in curing intermitting fevers.

We ſtrongly ſuſpect that the *amygdalina* is no other than this ſpecies.

HYDROCOTYLE VULGARIS. MARSH PENNYWORT, or WHITE-ROT.

HYDROCOTYLE *Linn. Gen. Pl.* PENTANDRIA DIGYNIA.

Umbella ſimplex: *Involucra* 4-phylla. *Petala* integra. *Semina* ſemiorbiculato-compreſſa.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

HYDROCOTYLE *vulgaris* foliis peltatis, umbellis quinqueforis. *Linn. Syſt. Vegetab. p.* 271. *Sp. Pl. p.* 338. *Fl. Suec. n.* 234.

HYDROCOTYLE foliis rotundis emarginatis, petiolis centralibus, umbellis faſtigiatis. *Hall. Hiſt.* 812.

RANUNCULUS aquaticus, cotyledonis folio. *Bauh. Pin.* 180.

COTYLEDON paluſtris. *Ger. emac.* 350. *Parkinſ.* 1214.

HYDROCOTYLE vulgaris. *Inſt. R. H.* 328. *Raii Syn. p.* 222. Marſh Pennywort, or White-Rot. *Hudſ. Fl. Angl. ed.* 2. *p.* 110.

RADICES perennes, capillaceæ, albidæ.
CAULES repentes, teretes, glabri, ad genicula radicantes.
FOLIA longitudine et latitudine vix pollicaria, longe petiolata, peltata, orbiculata, repanda aut ſublobata, crenulata, centro nonnihil depreſſa, punctoque albido notata, utrinque venis anaſtamoſantibus reticulata, glaberrima, nitentia, læte viridia. *Petioli* ſubbipollicares, erecti, teretes, glabri, inferne nudi, ſuperne pilis ſetoſis, horizontalibus, diſtantibus, hiſpiduli.

FLORES parvi, glomerati, albi, aut ſubrubelli, prope terram e repente caule ad axillas petiolorum prodeuntes.
PEDUNCULI communes ſolitarii, vix ultra pollicares, erecti, teretes, piloſiuſculi, in glomerulis aut verticillis potius quam umbellulam terminantes. *Stipulæ* duæ, ſubrotundæ, membranaceæ, albæ, ad baſin cujuſvis pedunculi.

FLOSCULI 5, ad 9, fertiles, exigui, breviſſime pedicellati. Foliolum minutum, lineari-ſubulatum, ſingulo floſculo ſubjectum.
PERIANTHIUM proprium vix ullum.
COROLLA pentapetala, linearis diametro, PETALA ovata, acuta, integra, patentia, pallide roſea, *fig.* 1, 2, *auct.*
STAMINA: FILAMENTA 5, ſubulata, albida, corollâ breviora. ANTHERÆ minimæ, albæ, *fig.* 3.

PISTILLUM: GERMEN inferum, erectum, compreſſum, orbiculatum, ſubtrigonum, *fig.* 4. corpuſculo fungoſo, flavo, coronatum; STYLI duo, ſubulati, breviſſimi; STIGMATA obtuſiuſcula, alba, *fig.* 5.
PERICARPIUM nullum: FRUCTUS orbiculatus, compreſſus, bipartibilis.
SEMINA duo, orbiculata, compreſſa, pallide fuſca.

ROOTS perennial, capillary, whitiſh.
STALKS creeping, round, ſmooth, ſtriking root at the joints.
LEAVES in length and breadth about an inch, ſtanding on long footſtalks inſerted into the centre of the leaf, orbicular, waved or ſomewhat lobed and notched on the edge, the centre a little depreſſed, and marked with a white dot, veins anaſtamoſing and forming a kind of net-work on each ſide the leaf, perfectly ſmooth, gloſſy, and of a bright green colour. The *Leaf-Stalks* about two inches long, upright, round, ſmooth, naked below, above beſet with briſtly, horizontal, diſtant hairs.
FLOWERS ſmall, in cluſters, white or reddiſh, proceeding from the creeping ſtalk near the ground out of the alæ of the leaf-ſtalks.
GENERAL PEDUNCLES ſingle, little more than an inch in length, upright, round, ſlightly hairy, producing little balls or whorls rather than terminating in an umbel of flowers. *Stipulæ* two, roundiſh, membranous, white, at the baſe of each peduncle.
FLORETS from 5 to 9, very ſmall, ſtanding on very ſhort foot-ſtalks, a very minute leaf, narrow and tapering, placed under each floret.
PERIANTHIUM of each floret ſcarcely any.
COROLLA pentapetalous, a line in diameter, the PETALS ovate, pointed, entire, ſpreading, of a pale roſe colour, *fig.* 1, *magnif. fig.* 2.
STAMINA: 5 Filaments, tapering, whitiſh, ſhorter than the corolla: ANTHERÆ very ſmall and white, *fig.* 3.
PISTILLUM: GERMEN beneath the corolla upright, flattened, orbicular, ſomewhat three-cornered, *fig.* 4. crowned with a yellow fungous ſubſtance; STYLES two, tapering, very ſhort; STIGMATA bluntiſh, white, *fig.* 5.
SEED-VESSEL none, FRUIT orbicular, flattened, ſplitting in two.
SEEDS two, orbicular, flattened, of a pale brown colour.

The name of *White-Rot* has been given to this plant, from an idea of its being the cauſe of the rot in ſheep, an opinion founded we apprehend more on conjecture than experiment; the real cauſe of that diſeaſe is we fear yet to be diſcovered, and will not be found perhaps to ariſe from their feeding on any particular plant.

It is extremely common on all boggy ground near London, and we believe in every part of Great-Britain. It flowers in July and Auguſt.

The fructification of this plant, which proves it truly to be related to the umbelliferi, is rarely ſeen without a cloſe examination, being uſually hidden by the leaves, but as it is plentifully produced, it may readily be diſcovered at the proper ſeaſon.

The leaf affords an excellent example of what LINNÆUS calls the *folium peltatum*.

Hydrocotyle vulgaris

Galium verum

GALIUM VERUM. YELLOW LADIES-BEDSTRAW.

Linn. Gen. Pl. TETRANDRIA MONOGYNIA.

Cor. monopetala, plana, *Sem.* duo, ſubrotunda.

Raii Syn. Gen. 12. HERBÆ STELLATÆ.

GALIUM *verum* foliis octonis linearibus ſulcatis, ramis floriferis brevibus. *Linn. Sp. Pl.* [illegible] *Mant. p.* 150. *Sp. Pl. p.* 155.

GALIUM foliis linearibus, perangustis, octonis, racemis multifloris, ſpicatis. *Hall. Hiſt. n.* 710. *Scop. Fl. Carn. n.* 153.

GALLIUM luteum. *Bauh. Pin. p.* 335. *Ger. em.* 1126. *Park.* 565. *Raii Syn. p.* 224. Yellow Ladies-Bedſtraw, or Cheeſe-Rening. *Hudſ. Fl. Angl. ed.* 2. *p.* 65.

RADIX perennis, repens, tenuis, ſublignoſa, lutea.

CAULIS pedalis, ad bipedalem, erectus, obſolete tetragonus, parum flexuoſus, geniculatus, ſcaber, inferne minus ſuperne magis pubeſcens, pallide viridis, verſus ſummitatem ramoſus; Geniculæ cylindraceæ, tumoratæ, albidæ, margine tenui cinctæ: Rami brachiatim oppoſiti, alterni multo breviores, patulo-erecti, floriferi.

FOLIA ſubpollicaria, margini geniculorum inſerta, ſeſſilia, verticillata, reflexo-patula, linearia, obtuſiuſcula, [illegible] mucronata, baſi attenuata, margine ultra apicem revoluto, acutiſque minutiſſimis aculeato tantum conſpicuis ſurſum aſpero, ſupra rugoſiuſcula, obſcure viridia, nitentia, ſubtus canaliculata, pallidiora, inferiora, plerumque octona, non raro dena, ſuperiora ſeptena, ſena, quina, quaterna, ſuprema terna, bina, et ad ultimos pedicellos ſingula.

FLORES paniculati, numeroſi, parvuli, flavi, peculiari odore fragrantes.

PANICULA e ramis floriferis compoſita, ſpithamea, et ultra, interrupta, ramoſa, ramis multifloris, inæqualibus, foliolis, foliolis pedicellorum ſolitariis.

CALYX vix conſpicuus, *fig.* 1.

COROLLA monopetala, rotata, patens, ungue nulla; laciniis quatuor, planis, ſubreflexis, diſtantibus, ovalibus, acutis, *fig.* 2.

STAMINA: FILAMENTA 4, capillaria, erecta, corolla breviora; ANTHERÆ rotundatæ, flavæ, peracto officio fuſcellæ. *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, didymum, compreſſum, glabrum; STYLUS profunde bipartitus; STIGMATA capitata, *fig.* 4, 5, 6.

PERICARPIUM: BACCÆ duæ, ficcæ, globoſæ, coalitæ.

SEMINA ſolitaria, ſubreniformia, rugoſa.

ROOT perennial, creeping, ſlender, ſomewhat woody, of a yellow colour.

STALK from one to two feet high, upright, ſlightly four-cornered, a little crooked, jointed, rough, below ſlightly, above more obviouſly pubeſcent, of a pale green colour, branched towards the top; the joints cylindrical, ſomewhat ovate, whitiſh, ſurrounded with a ſlight margin; Branches croſs-ways oppoſite, the alternate ones much the ſhorteſt, betwixt upright and ſpreading, flower bearing

LEAVES about an inch in length, inſerted into the edge of the joints, ſeſſile, whorled, ſpreading and ſomewhat turned back, linear, bluntiſh, with a ſlight point, narrowed at the baſe, the edge on each ſide rolled back, and rough with minute prickles turned upwards, which are viſible only with a magnifier, above ſlightly wrinkled, of a deep green colour, gloſſy, underneath hollowed, of a paler colour, the lowermoſt growing uſually eight in a whorl, not unfrequently ten, the upper ones decreaſing to 7, 6, 5, 4, 3, 2, and even 1 at the extremities of the branches.

FLOWERS growing in a panicle, numerous, ſmall, yellow, fragrant with a peculiar odour.

PANICLE compoſed of the flowering branches, about a ſpan in length, interrupted, branched, branches many flowered, unequal, leafy, the ſmall leaves of the pedicles ſingle.

CALYX ſcarcely viſible, *fig.* 1.

COROLLA monopetalous, wheel-ſhaped, ſpreading, without any claw, divided into four ſegments, which are flat, a little turned back, diſtant, oval, and pointed, *fig.* 2.

STAMINA four capillary FILAMENTS, upright, ſhorter than the corolla; ANTHERÆ roundiſh, yellow, finally browniſh, *fig.* 3.

PISTILLUM: GERMEN nearly round, double, flattened, ſmooth; STYLE deeply divided into two; STIGMATA two little heads, *fig.* 4, 5, 6.

SEED-VESSEL: two, dry, globular

BERRIES united together.

SEEDS ſingle, ſomewhat kidney-ſhaped and wrinkled.

Grows plentifully in the neighbourhood of London, in dry hilly paſtures, and on the borders of fields, flowering in June, July, and Auguſt.

We have ſeen the foliage of this plant, when all the ſurrounding herbage has been parched up, ſupport the fineſt verdure; perhaps on this account it may be cultivated to advantage on ſuch lawns as are apt in dry ſeaſons to "diſcloſe an arid hue."

An ingenious gentleman converſant in dying, aſſured me that it was a plant highly deſerving of culture, as an article in that buſineſs; for that the roots, though not ſo large as thoſe of Madder, produced a brighter colour, and that the whole of the herbage dyed a good yellow, in which reſpect it had the advantage over Madder.

The flowers of this plant have a moderately ſtrong, not diſagreeable ſmell, the leaves little or none: they both diſcover to the taſte a ſenſible acidity, which they manifeſt alſo by changing the juices of blue flowers to a red, and by coagulating boiling milk: they are ſaid to be in ſome places commonly made uſe of in this laſt intention, whence one of the common names of the plant *Cheeſe rennet*. Their acid matter appears to be (if BORRICHIUS's experiment is to be depended on) of a more ſubtle kind than that of Sorrel, and than the other native vegetable acids that have been examined; the flowery tops committed to the ſtill as ſoon as gathered, giving over a pretty ſtrong acid liquor in a moderate heat, wherein Sorrel yielded only an inſipid phlegm. The reſtringent and refrigerating virtues aſcribed to this plant appear from theſe experiments to have ſome foundation. *Lewis's Mat. Med. p.* When it diffuſes a ſtronger odour than common, it denotes, according to LOESEL, rainy and tempeſtous weather.

This plant is ſubject to a diſeaſe, in which the ſtem and branches are ſet with fleſhy balls, about the ſize of a pea, hollow within, and covered with a purpliſh ſkin. WITHERING.

CHRYSANTHEMUM SEGETUM. CORN CHRYSANTHEMUM, or MARIGOLD.

Linn. Gen. Pl. SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* marginatus. *Cal.* hæmiſphericus, imbricatus, ſquamis marginalibus membranaceis.

Rai Syn. Gen. 8. HERBÆ FLORE COMPOSITO, DISCOIDE, SEMINIBUS PAPPO DESTITUTIS, CORYMBIFERÆ DICTÆ.

CHRYSANTHEMUM *ſegetum* foliis amplexicaulibus, ſuperne laciniatis, inferne dentato-ſerratis. *Linn. Syſt. Veg. ed.* 14. *Murr. p.* 773. *Sp. Pl. p.* 1254.

BELLIS lutea, foliis profunde inciſis, major. *Bauh. Pin.* 262.

CHRYSANTHEMUM ſegetum. *Ger. emac.* 743. noſtras. *Park.* 1370. ſegetum. *Rai Syn. p.* 182. Corn Marigold. *Hudſon Fl. Angl. ed.* 2. *p.* 371.

RADIX annua, tenuis, perpendicularis, parum fibroſa, albida.

CAULIS pedalis et ultra, erectus, ramoſus, teretiuſculus aut obſolete angulatus, glaber, nitens, glauceſcenti-viridis, cavus, in pedunculos continuatus. Rami breviuſculi.

FOLIA remotiuſcula, alterna, ſeſſilia, ſemiamplexantia, erecto-patula, variantia, oblonga aut oblongo-ſubovata, baſi latiora, ſubſagittata, ſubauriculata, nonnulla ſupra baſin coarctata, verſus apicem latiora, margine dentata, dentibus, nunc remotioribus nunc approximatioribus aut laciniata, laciniis obtuſiuſculis, apice acuta, ſæpe trifida, lævia, mollia, leviter venoſa, utrinque glauca.

FLORES ſolitarii, flavi, magni.

PEDUNCULI ſubereCti, cavi, ſuperne incraſſati, uniflori.

CALYX *communis*, hemiſphæricus, imbricatus, ſquamis arcte incumbentibus, ovatis, virescentibus, interioribus per gradus majoribus, intimis terminatis margine ſcarioſa, tenuiſſima, membranacea, lacera, ſubfuſca.

COROLLA compoſita, radiata; *Corollulæ* diſci hermaphroditæ. numeroſæ, longitudine calycis, tubuloſæ, quinquefidæ, *fig.* 2. *Corollulæ* radii femineæ, circa 16 aut 18, ligulatæ, oblongæ, truncatæ, emarginatæ, ſæpe tridentatæ, lineis duabus impreſſis exaratæ, *fig.* 1.

STAMINA *hermaphroditis*, FILAMENTA 5, capillaria, breviſſima, flava; ANTHERA cylindracea, tubuloſa, concolor, corolla paulo brevior.

PISTILLUM *hermaphroditis* uti *femineis*; GERMEN ovatum, compreſſum, margine membranaceum; STYLUS filiformis, ſtaminibus longior, concolor; STIGMATA duo, revoluta, flava.

SEMINA oblonga, utrinque obtuſe truncata, ſulcata, ſubangulata, ſubincurva, pallide fuſca, *fig.* 3, 4.

RECEPTACULUM nudum, punctatum, convexum.

ROOT annual, ſlender, perpendicular, ſlightly fibrous, and whitiſh.

STALK a foot or more in height, upright, branched, nearly round or ſlightly angular, ſmooth, ſhining, of a glaucous green colour, hollow, continued into peduncles. Branches rather ſhort.

LEAVES ſomewhat remote, alternate, ſeſſile, half embracing the ſtalk, betwixt upright and ſpreading, variable, oblong, or oblong with a tendency to ovate, broadeſt at the baſe, ſomewhat arrowſhaped and ſlightly ear'd, ſome of them narrowed above the baſe, and broadeſt towards the top, the edge toothed, the teeth ſometimes nearer to each other, ſometimes more remote, or jagged, the ſegments a little blunt, the extremity pointed, often trifid, ſmooth, ſoft, ſlightly veiny, and glaucous on both ſides.

FLOWERS growing ſingly, yellow, large.

FLOWER-STALKS nearly upright, hollow, thickened above, one-flowered.

CALYX *common to all the florets*, hemiſpherical, imbricated, the ſcales lying cloſely one over the other, ovate, greeniſh, the inner gradually largeſt, the innermoſt ones terminated by a margin ſonorous to the touch, very thin, membranous, torn, browniſh.

COROLLA compound, radiate, *Florets* of the diſk, hermaphrodite, numerous, the length of the calyx, tubular, divided into five ſegments, *fig.* 2. *Florets* of the radius female, about 16 or 18, flat, oblong, truncated, emarginate, often three-toothed, and ſcored with two impreſſed lines, *fig.* 1.

STAMINA in the *hermaphrodite florets*, five, capillary, very ſhort FILAMENTS of a yellow colour; ANTHERÆ of the ſame colour, forming a tubular cylinder, a little ſhorter than the corolla.

PISTILLUM in the *hermaphrodite florets* the ſame as in the *female*; GERMEN ovate, flattened, margin membranaceous: STYLE thread-ſhaped, longer than the ſtamina, and of the ſame colour; STIGMATA two, rolled back, and yellow.

SEEDS oblong, obtuſely truncated at each end, grooved, ſomewhat angular, a little bent, of a pale brown colour, *fig.* 3. 4.

RECEPTACLE naked, dotted, and convex.

The *Chryſanthemum ſegetum*, as its name imports, is a plant peculiar to corn fields; in the neighbourhood of London it is not frequent, but in many parts of England, as well as in other parts of Europe, in ſuch ſoils as are favourable to its growth, it abounds to that degree as almoſt to annihilate the crop ſown; hence laws have been enacted, and fines impoſed, in Denmark, Saxony, and ſome parts of Scotland, for the purpoſe of obliging the huſbandman to keep his lands clear of it.

The weeding of corn fields from ſuch incroaching plants as the preſent, either by the hand, or the weeding-hook, according to the nature of the plant, is a practice much followed in thoſe countries which are beſt cultivated: there is this ſatisfaction attends it, while it promotes the Farmer's intereſt, it gives employment to a great number of induſtrious women and girls. To the prevalence of this practice it is that we are indebted for one of the fineſt ſights a cultivated country affords, extenſive fields of corn, without a ſingle obtruding weed; and on this practice the Farmer we apprehend may place a firmer reliance, than on the mode which LINNEUS recommends for its extirpation, viz. by dunging the land, ſuffering it to lie fallow for one year, and harrowing it five days after ſowing the corn.

It is not a little remarkable, that this plant ſhould never have been found with double flowers; if it had, there is no doubt, but from the brilliancy of their colour, it would long ſince have contributed to ornament our gardens as well as the *C. coronarium* and *inodorum*, which are of the ſame genus.

Chrysanthemum Segetum

Caucalis Anthriscus.

CAUCALIS ANTHRISCUS. HEDGE CAUCALIS.

Hudſon Fl. Angl. ed. 2. *p.* 112. PENTANDRIA DIGYNIA.

Corollæ radiatæ. *Fructus* ſubovatus, ſtriatus, ſetis rigidis hiſpidus.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

CAUCALIS *Anthriſcus* involucris multifidis*, umbella conferta, ſeminibus oblongis, foliolis ovatis pinnatifidis, ramis erectis. *Hudſon Fl. Angl. ed.* 2. *p.* 12.

TORDYLIUM *Anthriſcus* umbellis confertis, foliolis ovato-lanceolatis, pinnatifidis. *Linn. Syſt. Vegetab. p.* 275. *Mantiſ.* 350. *Jacq. Fl. Auſtr. v.* 3. *t.* 251.

CAUCALIS foliis duplicato-pinnatis, nervo multoties latioribus. *Hall. Hiſt. n.* 741.

CAUCALIS *Anthriſcus. Scopoli Fl. Carn. n.* 311.

CAUCALIS femine aſpero floſculis rubentibus. *Bauh. Pin.* 153.

CAUCALIS minor floſculis rubentibus. *Ger. emac.* 1022.

CAUCALIS minor flore rubente. *Parkinſ.* 921.

ANTHRISCUS quorundam femine aſpero hiſpido. *I. B.* III. 2. 83. *Raii Syn. ed.* 3. *p.* 219. *An.* 4. Hedge Parſley.

RADIX annua, tenuis, fuſiformis, parum fibroſa, extus flavicans, intus alba.

CAULIS 4—6 pedalis, erectus, ſubflexuoſus, teres, purpuraſcens, ſcaber, ſetis minutis rigidis vix viſibilibus deorſum appreſſis veſtitus, ramoſus. *Rami* plures, alterni, ſuberecti.

FOLIA pauca, fere palmaria, remota, patentiſſima, duplicato-pinnata, ad apices deflexa, petiolata, petiolis canaliculatis, baſi latiore ſubvaginantibus; *Pinnarum* tria, quatuorve paria, cum impari, ovatæ, acutæ, inferiores petiolatæ, latiores, ſequentes ſeſſiles, breviores, anguſtiores, extima longiſſima, lineari-lanceolata; *Foliola* inciſo-ferrata acutiuſcula, ſetis minutis conſpicuis tamen obſita.

FLORES in umbellis mediocribus planis, albi aut rubentes, inodori.

UMBELLA *univerſalis* planiuſcula, rara, inæqualis, radiis circiter octo; *partialis* paulo denſior, convexiuſcula, inæqualis, radiis 12 aut pluribus, exterioribus longioribus, omnibus ſetis ſurſum appreſſis hiſpidis.

INVOLUCRUM: *univerſale* polyphyllum, dimidia radiorum longitudine, foliolis radiorum plerumque numero, linearibus, acutis, margine membranaceo, albido; *partiale* polyphyllum, foliolis conſimilibus, appreſſis, longitudine umbellularum.

PERIANTHIUM proprium 5-dentatum, exiguum ſepæ inter pilos reconditum.

COROLLA: *univerſalis* difformis, radiata; *Floſculi* diſci abortivi; *propria diſci* mas, parva, petalis 5 inflexo-cordatis, æqualibus; *propria radii* hermaphrodita, petalis 5, inflexo-cordatis, patentiſſimis, ſubtus villoſiuſculis, extimis pauco majoribus, bifidis, *fig.* 1. auct.

STAMINA omnibus, FILAMENTA 5, capillaria, petalis paulo longiora; ANTHERÆ parvæ, didymæ, purpureæ, *fig.* 2.

PISTILLUM: GERMEN oblongum, inferum, hiſpidum: STYLI duo, breves, patentes, demum reflexi; STIGMATA duo, obtuſa.

PERICARPIUM nullum: *Fructus* parvus, ovatus, leviter compreſſus, *fig.* 4.

SEMINA duo, hinc gibba, triſulca, ſetis rigidis ſurſum arcuatis albis aut rubellis hiſpida, illinc linea glabra longitudinaliter excavata, *fig.* 5.

ROOT annual, ſlender, tapering, ſlightly fibrous, yellowiſh without and white within.

STALK from 4 to 6 feet high, upright, a little crooked, round, purpliſh, rough, covered with minute rigid briſtles, preſſed downwards to the ſtalk, and ſcarcely viſible, branched. The *Branches* numerous, alternate, and nearly upright.

LEAVES few, a hand's-breadth nearly in length, diſtant, ſpreading greatly, doubly pinnated, turned downwards at the tips, ſtanding on footſtalks, which are hollowed above, broader at the baſe and ſomewhat ſheathing; *Pinnæ* three or four pair, with an odd one, ovate, pointed, the lower ones ſtanding on footſtalks, broader, the upper ones ſeſſile, ſhorter, narrower, the outermoſt very long, betwixt linear and lanceolate; the *ſmall Leaves* of which they are compoſed inciſo-ferrated, a little pointed, covered with very minute yet viſible ſetæ.

FLOWERS white or reddiſh, without ſcent, growing in middle-ſized flat umbels.

UMBEL: the *univerſal* one flattiſh, thin, unequal, with about eight rays; the *partial* one a little thicker, ſomewhat convex, unequal, with about twelve or more rays, the outermoſt longeſt, all of them hiſpid with ſetæ preſſed upwards.

INVOLUCRUM: the *univerſal* one compoſed of many leaves, about half the length of the rays, the leaves uſually as numerous as the rays, linear, pointed, the margin membranous and white; the *partial* one compoſed of many leaves, ſimilar to the others, preſſed to the rays, the length of the ſmall umbels.

PERIANTHIUM of each floret 5-toothed, minute, often hid among the hairs.

COROLLA: the *general* one miſhapen, radiated; *Florets* of the diſk abortive; *each floret of the diſk* male, ſmall, of 5 petals, inflexo-cordate, equal; *each floret of the radius* hermaphrodite, of 5 petals, inflexo-cordate, very widely ſpreading, on the under ſide ſlightly villous, the outermoſt ones ſomewhat largeſt and bifid, *fig.* 1. magn.

STAMINA in all the flowers, 5 capillary FILAMENTS, a little longer than the petals: ANTHERÆ ſmall, double, and purple, *fig.* 2.

PISTILLUM: GERMEN oblong, beneath the corolla, hiſpid; STYLES two, ſhort, ſpreading, finally bowed back; STIGMATA two, blunt.

SEED-VESSEL none: *Fruit* ſmall, ovate, ſlightly flattened, *fig.* 4.

SEEDS two, on one ſide gibbous, with three grooves, hiſpid with rigid briſtles of a white or red colour, bowed upwards, on the other ſide marked longitudinally with one ſmooth hollow groove, *fig.* 5.

* We preſume Mr. HUDSON means polyphyllis.

The

The *Caucalis Anthriſcus* approaches ſo near to the *infeſta* already figured, as ſometimes to occaſion ſome little difficulty in diſtinguiſhing the two: this difficulty did not eſcape the obſervation of RAY, who with uncommon accuracy has pointed out the peculiarities of each in his *Hiſt. Plant.* which we ſhall place before our readers, nearly in his own words.—" 1ſt, The *Anthriſcus* is the taller plant, growing to the height of two cubits (three " feet); the *infeſta*, more dwarf, ſcarcely ever exceeds a foot, or one cubit at fartheſt. 2dly, The *Anthriſcus* " is more upright, with longer internodes; the *infeſta*, with a more crooked ſtalk, has more numerous joints. " 3dly, The ſtalk of the *Anthriſcus* is more hirſute near the ground than that of the *infeſta*. 4thly, The florets " of the *Anthriſcus*, which are white, or of a pale red colour, have petals nearly equal in ſize, with purple " antheræ; the florets of the *infeſta* are white, verging to yellow; the two outermoſt petals are very manifeſtly " larger than the reſt, and the antheræ white. 5thly, The ſeeds of the *infeſta* are by far the largeſt, and the " little tips on the crown of the ſeed green; thoſe of the *Anthriſcus* are more fragrant, more aromatic, and of " a duller colour with purple tips. Laſtly, The *Anthriſcus* is ſeldom found but in hedges and among buſhes, " while the *infeſta* is never found in hedges, but for the moſt part among corn."

Theſe diſtinctions, as far as we have obſerved, are perfectly juſt, and worthy of their author; we ſhall only obſerve in addition, that when we have been at a loſs for a diſtinction, the moſt ready one has been afforded by the preſence of the involucrum, from which Mr. HUDSON has judiciouſly taken a part of its ſpecific character; the leaves of this, however, though always preſent, are ſometimes ſo cloſely preſſed to the radii, as not to be immediately viſible; the ſtyles too, in general, are bent or bowed back to a greater degree than in the *infeſta*.

This plant is very common in the neighbourhood of London, in the ſituations RAY deſcribes, flowering in July. Though the *infeſta* may ſometimes prove a troubleſome weed, this, from its place of growth, is in no degree ſuch.

SCOPOLI obſerves, that as the ſeed is not flat, nor has a margin, it cannot be conſidered as a *Tordylium*; he remarks alſo, that he has ſeen the cultivated plant with an involucrum of one leaf, and without any; as this is quite contrary to our experience, we ſuſpect he was deceived by the leaves of the involucrum being preſſed cloſe to the radii, which, as we have before obſerved, very often happens.

ACHILLEA MILLEFOLIUM. COMMON YARROW, or MILFOIL.

Linn. Gen. Pl. SYNGENESIA POLYGAMIA SUPERFLUA.
Recept. paleaceum. *Pappus* nullus. *Cal.* ovatus, imbricatus. *Floſculi* radii circiter quinque.
Raii Syn. Gen. 8. HERBÆ FLORE COMPOSITO, DISCOIDE, SEMINIBUS PAPPO DESTITUTIS, CORYMBIFERÆ DICTÆ.

ACHILLEA *Millefolium* foliis bipinnatis, nudis; laciniis linearibus, dentatis; caulibus ſuperne ſulcatis. *Linn. Syſt. Veg. ed.* 14. *Murr. p.* 778. *Sp. Pl. p.* 1267.

ACHILLEA foliis pinnatis, pinnis longe æqualibus, pinnatis, pinnulis trifidis et quinquefidis. *Hall. Hiſt.* 107. *Scop. Fl. Carn.* 1095.

MILLEFOLIUM vulgare. *Bauh. Pin.* 140. *Park.* 693. terreſtre vulgare. *Ger. em.* 1072. vulgare. *Raii Syn.* 183. Common Yarrow, or Milfoil. *Hudſon Fl. Angl. ed.* 2. *p.* 374.

RADIX perennis, repens, teres, fibrilloſa, cinereo albida.

CAULIS pedalis et ultra, erectus, teretiuſculus, ſubangulatus, inferne glaber, tomento tenui araneoſo veſtitus, ſuperne ſulcatus, lanuginoſus, ramoſus.

FOLIA alterna, lineari-lanceolata, radicalia petiolata, petiolis canaliculatibus, caulina ſeſſilia, ſubamplexantia, ſupra glabra, ſubtus villoſula, pinnata, pinnis oppoſitis, ſubovatis, multifidis, acutiuſculis, obliquis.

FLORES in corymbo terminali, lanuginoſo congeſti, albidi.

BRACTEÆ lineares, integræ, et pinnatifidæ, parviuſculæ, ad radios pedunculoſque corymbi.

CALYX *communis* ovatus, pubeſcens, arcte imbricatus, ſquamis ovatis, concavis, obtuſiuſculis, albo; membranaceis, apice fuſco ciliatis-nervo dorſali viridi.

COROLLA compoſita, radiata; *Corollulæ* diſci hermaphroditæ, circiter duodecim, infundibuliformes, calycis longitudine, *tubo* ſordide luteſcente, *limbo* quinquefido, laciniis ovatis, acutis, revolutis, ſubdiaphanis, albidis, *fig.* 1.

COROLLULÆ radii fœmineæ, plerumque quinque, planæ, patentes, ſuborbiculares, obtuſe tridentatæ, ſeu obſolete trifidæ, lacinula intermedia breviore, tubo cylindrico, virideſcente, ſtriato, ſubpubeſcente, calycis longitudine, *fig.* 2.

STAMINA *Hermaphroditis:* FILAMENTA quinque, capillaria, brevia; ANTHERA cylindracea, tubuloſa, lutea, *fig.* 3.

PISTILLUM *Hermaphroditis* et *Fœmineis:* GERMEN oblongum, compreſſiuſculum, ſubtetragonum, glabrum, albidum; STYLUS capillaris, ſtaminibus longior; STIGMATA duo, linearia, truncata, reflexo-patula, hyalina, *fig.* 4.

ROOT perennial, creeping, round, furniſhed with numerous fibres, of a whitiſh aſh-colour.

STALK a foot high or more, upright, nearly round, ſlightly angular, below ſmooth, covered with a ſlight cobwebby down, above grooved, woolly, and branched.

LEAVES alternate, betwixt linear and lanceolate, the radical ones ſtanding on foot-ſtalks, the foot-ſtalks hollowed above, thoſe of the ſtalk ſeſſile, ſomewhat embracing the ſtalk, above ſmooth, beneath a little villous, pinnated, the pinnæ oppoſite, ſomewhat ovate, multifid, ſomewhat pointed and oblique.

FLOWERS whitiſh, terminating in a woolly, cloſe corymbus.

BRACTEÆ linear, entire and pinnatifid, ſmalliſh, placed at the radii, and peduncles of the corymbus.

CALYX common to all the florets ovate, downy, cloſely imbricated with ovate, concave, bluntiſh ſcales, having a white, membranous edge, tipt with a brown fringe, the midrib green.

COROLLA compound, radiated, FLORETS of the diſk hermaphrodite, about twelve, funnel-ſhaped, the length of the calyx, *tube* dirty yellow, the limb quinquefid, the ſegments ovate, pointed, rolled back, rather tranſparent and whitiſh, *fig.* 1.

FLORETS of the radius female, uſually five, flat, ſpreading, ſomewhat round, bluntly three-toothed or faintly trifid, the middle ſegment ſhorter than the reſt, the tube cylindrical, greeniſh, ſtriated, ſlightly downy, the length of the calyx, *fig.* 2.

STAMINA in the *Hermaphrodite flowers:* five, capillary, ſhort FILAMENTS; ANTHERÆ forming a yellow, tubulous cylinder, *fig.* 3.

PISTILLUM in the *Hermaphrodite* and *Female* flowers, GERMEN oblong, a little flattened, ſomewhat four-cornered, ſmooth, whitiſh; STYLE very ſlender, longer than the ſtamina; STIGMATA two, linear, truncated, a little reflexed, pellucid, *fig.* 4.

The Yarrow is a plant extremely common with us in dry paſtures, on ditch-banks, and by road-ſides: it flowers from *July* to *September*, its bloſſoms are uſually white, but are frequently found of different ſhades from a pale to a deep red, the moſt brilliant of which are cultivated in our gardens for ornament.

Though the Yarrow conſtitutes a very large part of the paſturage of this kingdom, our agriculturiſts are not agreed whether to conſider it as a plant to be cultivated, or extirpated.

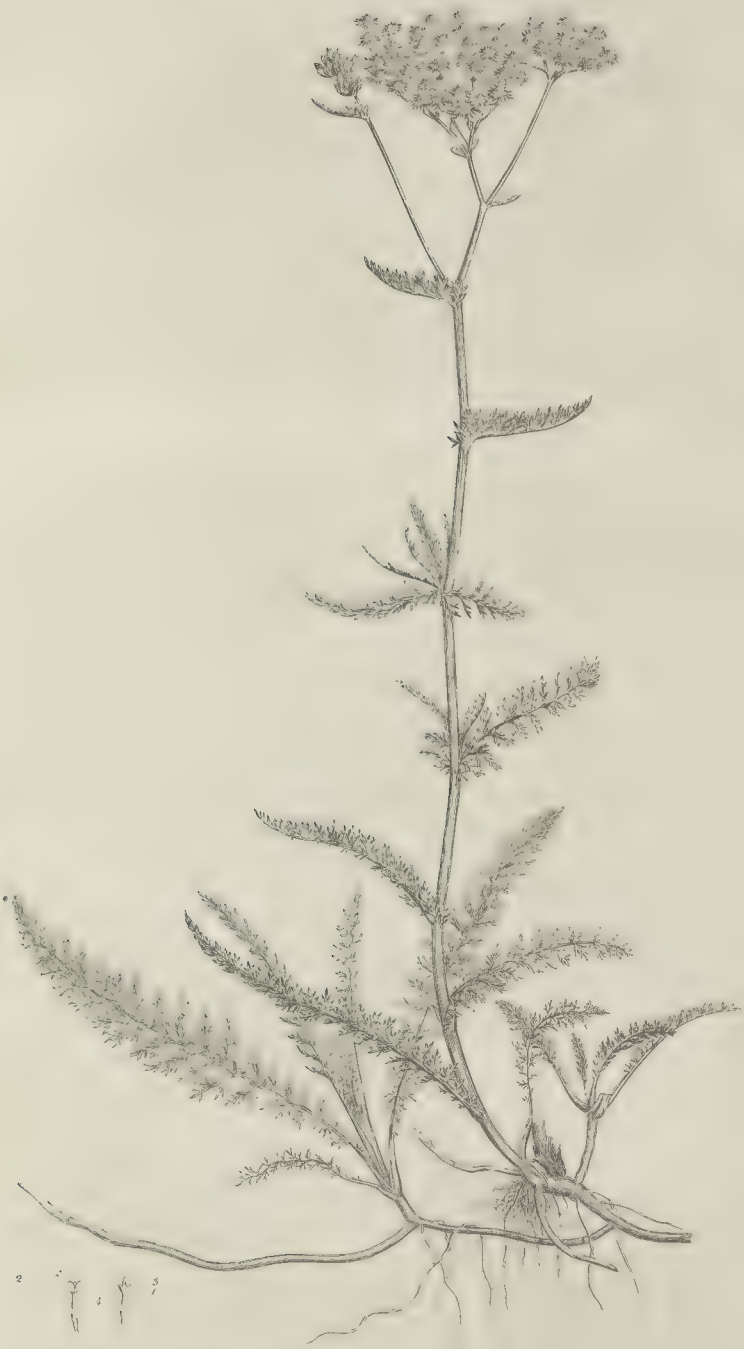
According to LINNÆUS's experiments, it was eaten by ſheep, horſes, and ſwine; kine and goats ſometimes eat, ſometimes rejected it, if we are to be influenced by the predilection which moſt of theſe animals have ſhewn for it, and are ſatisfied with the mode in which the experiments were conducted, we ſhould conſider it worthy of cultivation. MR. ANDERSON, who in general is too precipitate in his encomiums on new plants, ſpeaks very highly in its favour; he obſerves, that though cattle do not eat its flowering ſtems, which remain, and give the paſture a diſagreeable appearance, they are very fond of its foliage, which as it forms a cloſe pile, or as ſome expreſs it, a good bottom, makes it one of the moſt deſirable graſſes (ſpeaking in the language of huſbandry) the Farmer can ſow his land with; but he concludes this plant ſeems to be altogether unfit for hay, and therefore ought only to be ſown where the field is intended for paſturage.

The leaves and flowers of Milfoil are greatly recommended by ſome of the German Phyſicians, as mild corroborants, vulneraries, antiſpaſmodics, in diarrhoeas, hemorrhages, hypochondriacal, and other diſeaſes.

They promiſe by their ſenſible qualities to be of no inconſiderable activity. They have an agreeable, though weak, aromatic ſmell, and a bitteriſh, roughiſh, ſomewhat pungent taſte. The leaves are chiefly directed for medicinal uſe, as having the greateſt bitteriſhneſs and auſterity: the flowers have the ſtrongeſt and moſt ſubtle ſmell, are remarkably acrid, and promiſe to be of moſt efficacy, if the plant has really any ſuch efficacy as an anodyne or antiſpaſmodic.

The virtue of the leaves and flowers is extracted both by watery and ſpirituous menſtrua, the aſtringency moſt perfectly by the former, their aromatic warmth and pungency by the latter, and both of them equally by a mixture of the two. The flowers diſtilled with water yield a penetrating eſſential oil, poſſeſſing the flavour of the Milfoil in perfection, though rather leſs agreeable than the flowers themſelves, in conſiſtence ſomewhat thick, and tenacious, in colour remarkably variable, ſometimes of a greeniſh yellow, ſometimes of a deep green, ſometimes of a bluiſh green, and ſometimes of a fine blue: theſe differences ſeem to depend in great meaſure on the ſoil in which the plant is produced. *Lewis's Mat. Med. p.* 421.

In ſome parts of Sweden they put it to beer in a fermenting ſtate to produce inebriation. *Linn. Fl. Suec.*



. Achillea. Millefolium

Carduus arvensis

CARDUUS ARVENSIS. CURSED THISTLE.

Linn. Gen. Pl. SYNGENESIA POLYGAMIA ÆQUALIS.

Cal. ovatus, imbricatus, ſquamis ſpinoſis. *Receptaculum* pilofum.

Raii Syn. Gen. 9. HERBÆ FLORE EX FLOSCULIS FISTULARIBUS COMPOSITO, SIVE CAPITATÆ.

CARDUUS *arvenſis* foliis ſeſſilibus, inciſis, dentatis, ſpinoſis; caule multifloro; radice repente.

SERRATULA *arvenſis* foliis dentatis, ſpinoſis. *Linn. Syſt. Veg. ed.* 14. *Murr. p.* 724. *Sp. Pl.* 1149. *Fl. Suec.* 715.

CIRSIUM caule angulofo, ramoſo, foliis ſemipinnatis, pinnis angulofis, ſpinoſis, calycibus longis inermibus. *Hall. Hiſt.* 171.

CIRSIUM *arvenſe*, foliis lanceolatis, dentatis, ſpinoſis; calycinis ſquamis tomentoſis, inermibus, ariſtatis. *Scopoli Fl. Carn. n.* 1001.

CARDUUS vinearum repens, ſonchi folio. *Bauh. Pin.* 387. Ceanothos ſ. viarum et vinearum repens. *Park.* 959. vulgatiſſimus viarum. *Ger. emac.* 1173. *Raii Syn.* 191. Common Way-Thiſtle, or rather Creeping-Thiſtle. *Hudſon Fl. Angl. ed.* 2. *p.* 349.

RADIX perennis, teres, craſſitie fere digiti minimi, ſordide albida, profunde deſcendens, repens, undique longiſſime ſe protendens.

ROOT perennial, round, almoſt the thickneſs of the little finger, of a dirty white colour, penetrating deeply, and creeping far and wide.

CAULIS tripedalis, et ultra, erectus, ſubramoſus, baſi teres, lanuginoſus, ſuperne angulatus, lævis.

STALK three feet or more in height, upright, ſomewhat branched, at the baſe round, and ſomewhat woolly, above angular, and ſmooth.

FOLIA ſeſſilia, alterna, lanceolata, inciſo-ſubpinnatifida, ſubcompreſſa, ſinuata, undulato-criſpata, ſpinoſa, ſuperne lævia, viridia, ſubtus pallidiora, vix villoſiuſcula, ſuprema ſubintegra.

LEAVES ſeſſile, alternate, lanceolate, cut in ſo as to be ſomewhat pinnatifid, the ſides ſomewhat preſſed together, ſinuated, waved and curled, ſpinous, above ſmooth, green, beneath paler, ſcarcely villous, the uppermoſt ones almoſt entire.

FLORES pallide purpurei, mediocres, ſuaviſſime odorati.

FLOWERS middle-ſized, of a pale purple colour, very fragrant.

PEDUNCULI foliofi, uniflori, ſubbiflori, ſuperne ſubtomentoſi.

FLOWER-STALKS leafy, one or two-flowered, above ſomewhat woolly.

CALYX *communis* ovatus, apice contractus, imbricatus, ſquamis numeroſis, appreſſis, lanceolatis dorſo acutis, apice appendiculatis, mucronatis, purpuraſcentibus, mucronibus ſubreflexis, mitibus, *fig.* 1.

CALYX *common to all the florets* ovate, contracted at top, imbricated, the ſcales numerous, preſſed cloſe, lanceolate, ſharp at the back, terminated by a pointed appendage, purpliſh, points turning a little back, and mild, *fig.* 1.

COROLLA: compoſita, tubuloſa, uniformis; *Corollulæ* omnes hermaphroditæ, ſubæquales, monopetalæ, infundibuliformes, *tubo* tenuiſſimo, *limbo* quinquefido, reflexo, laciniis linearibus, unica profundius ſeparata, *fig.* 2.

COROLLA compound, tubular, uniform, all the *Florets* hermaphrodite, nearly equal, monopetalous, funnel-ſhaped, the *tube* very ſlender, the limb divided into four, linear, reflexed ſegments, one more deeply divided than the reſt, *fig.* 2.

STAMINA; FILAMENTA 5, capillaria, breviſſima, alba; ANTHERA cylindracea, corolla brevior, ore quinquedentato, dentibus apice albis.

STAMINA: five capillary FILAMENTS, very ſhort and white; ANTHERÆ united into a cylinder, ſhorter than the corolla, the mouth 5-toothed, the teeth white at the tips.

PISTILLUM: GERMEN ovatum, compreſſum; STYLUS filiformis, ſtaminibus longior, ex albido-rubellus; STIGMA obtuſum, demum bifidum.

PISTILLUM: GERMEN ovate, compreſſed; STYLE filiform, longer than the ſtamina, of a whitiſh red colour; STIGMA obtuſe, finally bifid.

SEMINA linearia, obſolete tetragona; PAPPUS plumoſus, ſeſſilis, *fig.* 4.

SEEDS linear, ſlightly four-cornered; DOWN feathery, ſeſſile, *fig.* 4.

RECEPTACULUM piloſum, pilis nitentibus, *fig.* 5.

RECEPTACLE hairy, hairs gloſſy, *fig.* 5.

The ſeveral genera of *Carduus*, *Cirſium*, and *Serratula* are in many inſtances ſo nearly allied, that Botaniſts are frequently at a loſs for a character which ſhall diſcriminate them: without entering at preſent into a laboured diſquiſition on this ſubject, we ſhall only remark that to whatever genus the *Muſk Thiſtle* belongs (already figured in this work) this belongs to the ſame, if that be a Thiſtle, this muſt alſo be one: moreover, independent of the characters to be drawn from the fructification, every one will allow that it has more the habit of a *Carduus* than a *Serratula*.

We

We have beſtowed on this plant the harſh name of *curſed*, with a view to awaken the attention of the agriculturiſt to its nature and pernicious effects; repeated obſervation has convinced us that many huſbandmen are ignorant of its œconomy, and while they remain ſo they will not be likely to get rid of one of the greateſt peſts which can affect their corn-fields and paſtures.

Of the Thiſtle tribe the greateſt part are annual or biennial, and hence eaſily deſtroyed, ſome few are not only perennial, but have powerfully creeping roots, and none ſo much as the preſent; in pulling this plant out of the ground, we draw up a long ſlender root which many are apt to conſider as the whole of it, but if thoſe employed in ſuch buſineſs examine the roots ſo drawn up, they will find every one of them broke off at the end, for the root paſſes perpendicularly to a great depth, and then branches out horizontally under ground.

To give an idea of its aſtoniſhing increaſe, we ſhall ſubjoin from the memoirs of the Bath Agricultural Society an experiment made for the very purpoſe of aſcertaining it *. When this paper was delivered to the ſociety from experiments then made, I was of opinion that repeated mowing or ſpudding would not deſtroy this Thiſtle, I have ſince had cauſe from further obſervation and experiments to think differently; ſo deep however does it penetrate that theſe operations are the only ones which can well be applied to its deſtruction, and if they do not effectually overcome, they will greatly enfeeble it.

This ſpecies is ſeen every where by road-ſides, too frequently in corn-fields, and more rarely in paſtures; it flowers from *June* to *Auguſt*.

The *Papilio Cardui* feeds on its foliage; the ſtalks are frequently diſfigured by large tubercles, the effect we apprehend of a *Cynips*, and the leaves, eſpecially on the under-ſide, are ſometimes obſerved of a deep brown colour, as if covered with ſnuff, the effect of ſome diſeaſe, with the cauſe of which we are as yet unacquainted.

It varies with white flowers, and the leaves have ſometimes few or no ſpines on them.

* April 1ſt, 1778, I planted in a garden a piece of the root of this Thiſtle, about the ſize of a gooſe-quill, and two inches long, with a ſmall head of leaves, cut off from the main root juſt as it was ſpringing out of the ground; by the 2d of the November following this ſmall root had thrown out ſhoots, ſeveral of which had extended themſelves to the diſtance of eight feet, ſome had even thrown up leaves five feet from the original root; moſt of the ſhoots which had thus far extended themſelves were about ſix inches under ground, others had penetrated to the depth of two feet and a half, the whole together when dug up and waſhed from the earth weighed four pounds. In the ſpring of 1779, contrary to my expectation, this Thiſtle again made its appearance on and about the ſpot where the ſmall piece was originally planted; there were between 50 and 60 young heads, which muſt have ſprung from the roots which had eluded the gardener's ſearch, though he was particularly careful in extracting them.

LATHYRUS SYLVESTRIS. NARROW-LEAV'D VETCHLING, or EVERLASTING-PEA.

LATHYRUS *Linn. Gen. Pl.* DIADELPHIA DECANDRIA.

Stylus planus, ſupra villoſus, ſuperne latior. *Cal.* laciniæ ſuperiores 2 breviores.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

LATHYRUS *ſylveſtris* pedunculis multifloris, cirrhis diphyllis: foliolis enſiformibus, internodiis membranaceis. *Linn. Syſt. Vegetab. p.* 663. *Sp. Pl.* 1033. *Fl. Suec. n.* 644.

LATHYRUS caule alato, foliis geminis enſiformibus. *Haller Hiſt.* 434.

LATHYRUS *ſylveſtris*. *Scopoli Fl. Carn. n.* 892.

LATHYRUS ſylveſtris major. *Bauh. Pin.* 344.

LATHYRUS ſylveſtris Dodonæi. *Park.* 1061.

LATHYRI majoris ſpecies flore rubente et albido minore dumetorum, ſive Germanicus. *J. B. II.* 302. *Raii Syn. p.* 319. *Hudſon Fl. Angl. p.* 317. *Lightfoot Fl. Scot. p.* 392.

RADIX perennis.
CAULIS orgyalis, et ultra, ſcandens, ramoſus, alatus, lævis.
FOLIA petiolata, bina, enſiformia, mucronata, ſubtus trinervia, baſi glanduloſa.

PETIOLI triquetri, alati.
CIRRHI plerumque trifidi.
STIPULÆ lineari-lanceolatæ, baſi hamatæ.

PEDUNCULI ſpithamei, ſubangulati, nudi, multiflori.
FLORES racemoſi, 5 ad 10.
BRACTEÆ ſubulatæ.
PEDICELLI breves, nutantes, colorati.

CALYX: PERIANTHIUM monophyllum, ſubcampanulatum, quinquedentatum, quinquenerve, dentibus duobus ſuperioribus brevibus, incurvis, tribus inferioribus rectis, longioribus, *fig.* 1.

COROLLA papilionacea; VEXILLUM amplum, emarginatum, roſeum, venis obſolete reticulatum, *fig.* 2. ALÆ oblongæ, obtuſæ, violaceæ, carinæ adherentes, *fig.* 3. CARINA ex albido-vireſcens, ſubtortuoſa, *fig.* 4.
STAMINA: FILAMENTA decem (ſimplex et novem fidum) decimum ſubliberum, obliquum; ANTHERÆ flavæ.
PISTILLUM: GERMEN oblongum, compreſſum; STYLUS ſurſum erectus, ſuperne latior; STIGMA antice villoſum.
PERICARPIUM: LEGUMEN ſubbiunciale, ſemunciam fere latum, compreſſum, læve, fuſcum, polyſpermum, *fig.* 5.
SEMINA numeroſa, ad 10 aut 12, ſubrotunda, nigricantia, *fig.* 6.

ROOT perennial.
STALK ſix feet, or more in height, climbing, branched, winged, and ſmooth.
LEAVES ſtanding on footſtalks, two together, ſword-ſhaped, terminating in a ſhort point, beneath three-ribbed, glandular at the baſe.
LEAF-STALKS three-ſided and winged.
TENDRILS for the moſt part trifid.
STIPULÆ betwixt linear and lanceolate, hooked or bearded at bottom.
FLOWER-STALKS a ſpan long, ſomewhat angular, naked, and ſupporting many flowers.
FLOWERS growing in a bunch, from 5 to 10.
FLORAL LEAVES awl-ſhaped.
PARTIAL FLOWER-STALKS ſhort, drooping, and coloured.

CALYX: a PERIANTHIUM of one leaf, ſomewhat bell-ſhaped, having five teeth and five ribs, the two uppermoſt teeth ſhort and bent towards each other, the three lowermoſt ſtraight and longer, *fig*, 1.
COROLLA papilionaceous; STANDARD large, emarginate, roſe-coloured, faintly reticulated with veins, *fig.* 2. WINGS oblong, obtuſe, violet-coloured, adhering to the keel, *fig.* 3. KEEL of a whitiſh-green colour, a little twiſted, *fig.* 4.
STAMINA: ten FILAMENTS (nine connected, one ſingle) the tenth or ſingle one nearly free, oblique; ANTHERÆ yellow.
PISTILLUM: GERMEN oblong, flattened; STYLE bent upwards, broadeſt at top; STIGMA anteriorly villous.
SEED-VESSEL: a POD about two inches long, and nearly half an inch wide, flattened, ſmooth, brown, containing many ſeeds, *fig.* 5.
SEEDS numerous, from 10 to 12, nearly round, and blackiſh, *fig.* 6.

In the neighbourhood of London this ſpecies is rare; we have found it ſparingly in the Oak of Honour wood near Peckham: in many parts of Kent, in the hedges by the road ſides, it grows abundantly.

Though greatly inferior in beauty to the *Lathyrus latifolius*, it has been thought ſufficiently ornamental for the flower-garden, in which we frequently find it.

It flowers in June and July; being a hardy perennial, it requires little care in its cultivation: from its ſize it is rather adapted to the ſhrubbery or plantation than the flower-garden.

Lathyrus sylvestris

Pub. Jan. 1. 1796 by Wm. Curtis, Stewart's Row, Brompton.

Ornithopus perpusillus

Pub. Jan. 1 1791 by W. Curtis S.t Georges Cresent

ORNITHOPUS PERPUSILLUS. COMMON BIRD'S-FOOT.

ORNITHOPUS *Linn. Gen. Pl.* DIADELPHIA DECANDRIA.

Legumen articulatum, teres, arcuatum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

ORNITHOPUS *perpuſillus* foliis pinnatis, leguminibus incurvatis. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 670. *Spec. Pl. p.* 1049.

ORNITHOPODIUM caule proſtrato, foliis pinnatis, ſiliquis umbellatis, articulatis. *Hall. Hiſt. n.* 393.

ORNITHOPODIUM majus —, minus —, radice tuberculis nodoſa. *Bauh. Pin.* 350.

ORNITHOPODIUM minus. *Ger. emac.* 1241.

ORNITHOPODIUM radice nodoſa. *Park.* 1093. *Raii Syn. p.* 326. Bird's-foot. *Hudſon Fl. Angl. ed.* 2. *p.* 321. *Lightfoot Fl. Scot. p.* 399.

RADIX annua, tenuis, fibroſa; fibris longis, albidis, tuberculiferis.

ROOT annual, ſlender, fibrous; fibres long, whitiſh, beſet with tubercles.

CAULES plures, ſubpalmares, proſtrati, ſimplices, teretes, pubeſcentes.

STALKS ſeveral, about a hand's-breadth in length, proſtrate, ſimple, round, downy.

FOLIA pinnata, radicalia proſtrata, ſubpetiolata, caulina alterna, ſeſſilia; foliola 6 ad 9 juga, ſæpe cum impari, ovalia, ſubcarinata, per lentem piloſa.

LEAVES pinnated, the radical ones ſpread on the ground, and ſtanding on ſhort footſtalks, thoſe of the ſtalks alternate, ſeſſile, compoſed of from 6 to 9 pair of pinnæ, and often terminated by an odd one, oval, ſomewhat keeled, and hairy if magnified.

FLORES parvi, ex albo, rubro, et luteo pulchre variegati; pedunculi ex axillis foliorum 3-5 flori, longitudine folii.

FLOWERS ſmall, prettily variegated with white, red, and yellow, peduncles proceeding from the alæ of the leaves and of the ſame length, ſupporting from three to five flowers.

CALYX: UMBELLA ſimplex. PERIANTHIUM monophyllum, tubulatum, piloſum, perſiſtens, ore quinquedentato, ſubæquali, *fig.* 1.

CALYX: the UMBEL ſimple. The PERIANTHIUM monophyllous, tubular, hairy, permanent, the mouth having five teeth, nearly equal, *fig.* 1.

COROLLA papilionacea: VEXILLUM obcordatum, vix emarginatum, album, venis rubris pictum, *fig.* 2. ALÆ ovatæ, rectæ, albæ, magnitudine vix vexilli, *fig.* 3. CARINA compreſſa, flaveſcens, minima, *fig.* 4.

COROLLA papilionaceous: the STANDARD obcordate, ſcarcely emarginated, white, marked with red veins, *fig.* 2. WINGS ovate, ſtraight, white, ſcarcely ſo long as the ſtandard, *fig.* 3. KEEL flattened, yellowiſh, very minute, *fig.* 4.

STAMINA: FILAMENTA diadelpha, ſimplex et novemfidum, *fig.* 5. ANTHERÆ ſimplices, flaveſcentes, *fig.* 6.

STAMINA: FILAMENTS diadelphous, nine united, one ſingle, *fig.* 5. ANTHERÆ ſimple and yellowiſh, *fig.* 6.

PISTILLUM: GERMEN lineare, viride; STYLUS ſetaceus, aſcendens; STIGMA punctum terminale, ad lentem ſubcapitatum, *fig.* 7.

PISTILLUM: GERMEN linear, green; STYLE tapering, aſcending; STIGMA a terminal point, forming when magnified a little head, *fig.* 7.

PERICARPIUM: LEGUMEN ſubulatum, teres, arcuatum, articulatum, iſthmiſque interceptum, articulatim diſcedens, *fig.* 8, 9.

SEED-VESSEL: an awl-ſhaped, round, bowed, jointed POD with croſs diviſions, ſeparating at the joints, *fig.* 8, 9.

SEMINA ſolitaria, ſubrotunda, *fig.* 10.

SEEDS one in each joint, roundiſh, *fig.* 10.

The *Ornithopus perpuſillus* abounds on moſt of the heaths and commons near London, eſpecially where the ſoil is gravelly or ſandy.

It flowers from June to September.

The beauty of its flowers when cloſely examined, and the ſtriking ſimilitude which the ſeed-veſſels bear to the claws of a bird, render it an object highly deſerving of attention.

It varies greatly in point of ſize; the little knobs adhering to the roots are common to plants of the leguminous kind.

GERANIUM PARVIFLORUM. SMALL-FLOWERED CRANE'S BILL.

GERANIUM. *Linn. Gen. Pl.* MONADELPHIA DECANDRIA.
Monogynia. Stigmata 5. *Fructus roſtratus, pentacoccus.*
Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *parviflorum* caule ſubpubeſcente, floribus pentandris, petalis emarginatis, arillis lævibus pilis appreſſis veſtitis.

GERANIUM *puſillum* pedunculis biſloris, petalis biſidis, caule depreſſo, foliis reniformibus palmatis linearibus acutis. *Linn. Syſt. Veg. p.* 618. *Spec. Plant. p.* 957. *Mantiſſ.* 435. *Burm. Geran.* 23.

GERANIUM *puſillum* caule herbaceo ramoſo, foliis ſubrotundo-lobatis, lobis triſidis, floribus minimis pentandris cœruleis. *Cavanilles Diſc. p.* 202. *tab.* 83. *f.* 1.

GERANIUM foliis hirſutis, ſemiſeptilobis, lobis ſemitrilobis, obtuſis. *Hall. Hiſt.* 940.

GERANIUM *malvæfolium. Scopoli Fl. Carniol. ed.* 2. *n.* 847.

GERANIUM columbinum majus, flore minore cœruleo. *Raii Hiſt. Plant. p.* 1059. *Synopſ. p.* 358. The greater blue-flowered Dovesfoot-Craneſbill. *Vaill. Pariſ. tab.* 15. *f.* 1.

RADIX annua, teres, fibroſa, rubeſcens.
CAULES diffuſi, ſubpedales, teretes, pallide virides aut ſubrubentes, vix pubeſcentes, ramoſi.

FOLIA ſubrotunda, ſeptemfida, laciniis patentibus, trifidis, obtuſis, quibuſdam profundius partitis, ſinubus acutiuſculis; venoſa, villoſa, mollia, pallide viridia; radicalia longiſſime petiolata; caulina oppoſita, magnitudine inæqualia, longitudine pedunculis ſubæqualia, laciniis acutioribus.
STIPULÆ lanceolatæ, baſi latæ, rubræ, nitentes, laciniis acutis, ciliatis.
FLORES minuti, purpureo-cœrulei.
PEDUNCULI ſubunciales, axillares, ſolitarii, biflori.

BRACTEÆ ſeu Involucra ſtipulis ſimilia, modo breviora.
CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, acutis, ſurſum piloſis, ſtriatis, albo marginatis; duobus exterioribus latioribus, *fig.* 1.

COROLLA calyce paulo major, campanulato-hians, petalis 5 obcordatis, emarginatis, *fig.* 2.

NECTARIUM: GLANDULÆ 5 virides, cum petalis alternantes, *fig.* 3. auct.
STAMINA: FILAMENTA decem germen cingentia, quorum quinque longiora, fertilia, quinque alterna breviora, ſterilia, *fig.* 4, 5. ANTHERÆ quinque, ſubovatæ, cœruleæ, *fig.* 6.
PISTILLUM uti in affinibus, *fig.* 7.
SEMINA ſolitaria, reniformia, glabra, arillata, rufa. ARILLI caudati, pallide fuſci, læves, pilis albis, longitudinaliter adpreſſis, obſiti, *fig.* 8. auct. *fig.* 9.

ROOT annual, round, fibrous, reddiſh.
STALKS ſpreading, about a foot long, pale green, or ſometimes reddiſh, very ſlightly downy, branched.
LEAVES roundiſh, divided into ſeven lobes, the lobes trifid, obtuſe, ſome of them more deeply divided, the ſinuſes rather acute; veiny, villous, ſoft, pale green; the radical ones on very long footſtalks; the ſtalk-leaves oppoſite, of an unequal ſize, nearly as long as the peduncles, their lobes more acute.
STIPULÆ lanceolate, broad at bottom, red, ſhining, ſegments ſharp, edged with hairs.
FLOWERS very ſmall, of a purpliſh blue colour.
PEDUNCLES from the axilla, about an inch long, two-flowered.
BRACTEÆ or Involucra like the ſtipulæ, but ſmaller.
CALYX: a PERIANTHIUM of five leaves, which are ovate, acute, covered with hairs which point upwards, ſtriated, with a white margin, the two outer ones wider than the reſt, *fig.* 1.
COROLLA a little larger than the calyx, bell-ſhaped and open, conſiſting of five obcordate, emarginated petals, *fig.* 2.
NECTARY: five green GLANDULES, placed alternately with the petals, *fig.* 3. magnified.
STAMINA: ten FILAMENTS ſurrounding the germen, five of which are longer and fertile, the other five ſhorter and ſterile, *fig.* 4, 5. The five ANTHERÆ are nearly ovate, and blue, *fig.* 6.
PISTILLUM as in the other, *fig.* 7.
SEEDS ſolitary, kidney-ſhaped, ſmooth, reddiſh, covered with an arillus. The ARILLUS pale brown, ſmooth, with white longitudinal hairs preſſed cloſely to it, *fig.* 8. magnified at *fig.* 9.

While ſome Botaniſts have confounded this ſpecies with the *molle* already figured in this work, others have miſtaken it for the *rotundifolium*, from both of which it is ſpecifically different: RAY and VAILLANT, among the older Botaniſts, appear to have had a perfectly clear idea of it, as is evident from the deſcription of the one and the figure of the other; in the third edition of RAY's *Synopſis*, DILLENIUS has deſcribed and figured a plant which he calls *Geranium columbinum humile flore cæruleo minimo;* this plant was firſt adopted by LINNÆUS in his *Spec. Plantar.* under the name of *puſillum*, as appears from his referring to this very figure, a name applicable enough to DILLENIUS's plant as figured by him, but not to RAY's and VAILLANT's, which is the one here intended. Whether DILLENIUS's plant be a ſtinted variety of ours, or a diſtinct ſpecies, we ſhall not take upon us at preſent to determine; if the former, his figure, like that of his *Ceraſtium ſemidecandrum*, has contributed greatly to miſlead; if the latter, the name of *puſillum* would appear to be a very proper one, and may at any time be made uſe of.

Notwithſtanding there are ſtrong reaſons for ſuppoſing, from obſervations made in the latter works of LINNÆUS, that our plant is his *puſillum*, we have thought a name ſo very inapplicable ought not to remain as a ſtumbling-block, and have therefore ſubſtituted *parviflorum*, as coinciding with RAY's deſcription.

Having already deſcribed this plant minutely, we ſhall only mention a few of the ſtriking characters in which it differs from the *molle;* in what reſpect it varies from *rotundifolium*, will be particularly ſpecified when we figure that plant.

At firſt ſight it differs from the *molle*, in having its leaves more divided, of a paler and more yellow colour, its bloſſoms much ſmaller, of a bluer and leſs brilliant hue; more cloſely examined, the ſtalks are ſcarce perceptibly hairy, or but ſlightly pubeſcent, the leaves *in general* grow oppoſite, frequently not ſo towards the top of the ſtalks, and are more open behind; the ſtamina bearing antheræ are never more than five, and the arillus, or coat of the ſeed, inſtead of being tranſverſely wrinkled, as we have figured it in the *molle*, is comparatively ſmooth: for this latter diſtinction, which is a very eſſential one, a d indeed, I may ſay, for the diſcovery of the plant, I am indebted to the ſuperior diſcernment of my much-eſteemed and ingenious friend Mr. DAVAL, of *Orbe* in Switzerland.

On the Weſt ſide of London, particularly in the neglected gardens, and fallow-fields about Little-Chelſea, where the ſoil is light, this ſpecies is quite a weed; on the Eaſtern ſide, at leaſt near the metropolis, it is more rarely found: in many parts of England it grows equally common with the *molle*, than which it uſually forms a larger tuft, and ſometimes varies with white flowers.

It bloſſoms in June and July.

Geranium parviflorum

Carex centricosa

CAREX VENTRICOSA. TURGID CAREX.

CAREX. *Linn. Gen. Pl.* MONOECIA TRIANDRIA.

Maſc. *Amentum* imbricatum. *Cal.* monophyllus. *Cor.* 0.

Fem. *Amentum* imbricatum. *Cal.* monophyllus. *Cor.* 0. *Nectarium* inflatum tridentatum. *Stigmata* tria. *Sem.* triquetrum intra nectarium.

Raii Syn. Gen. 28. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

CAREX *ventricoſa*, ſpicis pedunculatis erectis, maſcula ſolitaria, femineis remotis paucifloris, capſulis turgidis roſtratis.

CYPEROIDES nemoroſum, caule exquiſitè triangulari, ſpicis parvis ſtrigoſis, inter ſe diſtantibus, ſquamis latis, derepentè in ariſtam longiuſculam attenuatis, capſulis rariùs diſpoſitis turbinatis gibbis trilateris cum roſtrulo adunco. *Michel. Nov. Gen. p.* 61. *tab.* 32. *fig.* 5.

RADIX perennis, fibroſa.

CULMUS pedalis ad ſeſquipedalem, erectus, foliоſus, triqueter.

FOLIA patulo-erecta, lineas duas lata, carinata, lævia, margine aſpera, baſi vaginantia, ſub floreſcentia culmo longiora.

FLOS MASCULUS.

SPICA terminalis, ſolitaria, ſubuncialis, erecta, multiflora, ebracteata, ſubfuſca.

CALYX: SQUAMA ſubovata, acuminata, dorſo viridi, lateribus ex albo et fuſco variegatis, *fig.* 1.

STAMINA: FILAMENTA tria, capillaria, calyce longiora. ANTHERÆ longæ, lineares, *fig.* 2.

FLOS FEMINEUS.

SPICÆ plerumque tres, remotiuſculæ, ſpica maſcula dimidio breviores, oblongo-ovatæ, ſubquadrifloræ, pedunculatæ, bracteatæ. PEDUNCULI compreſſi, ſuperne incraſſati. BRACTEÆ foliis ſimiles, culmum ſuperantes.

CALYX: SQUAMA lanceolata, acuta, dorſo viridi, lateribus albis nitentibus, *fig.* 3.

NECTARIUM oblongum, extus convexum, intus concavum, roſtratum, piſtillum arcte cingens, *fig.* 4.

PISTILLUM: GERMEN obovatum intra nectarium, *fig.* 5. STYLUS germine duplo longior, *fig.* 6. STIGMATA tria, patentia villoſa, *fig.* 7.

PERICARPIUM: CAPSULA triquetro-gibba, turgida, ſtriata, utrinque acuta, roſtro apice membranaceo, *fig.* 8.

SEMINA ſolitaria, magna, hinc convexa, inde planiuſcula, *fig.* 9. intra nectarium.

ROOT perennial and fibrous.

STALK from a foot to a foot and a half high, upright, leafy, and three-cornered.

LEAVES upright, ſomewhat ſpreading, two lines wide, keeled, ſmooth, rough on the edge, ſheathing at the baſe, higher than the ſtalk, when the plant flowers.

MALE FLOWER.

SPIKE terminal, ſolitary, about an inch long, upright, many-flowered, without a bractea, browniſh.

CALYX: SCALE ſomewhat ovate, acuminated, green at the back, the ſides variegated with white and brown, *fig.* 1.

STAMINA: three FILAMENTS, capillary, longer than the calyx. ANTHERÆ long, linear, *fig.* 2.

FEMALE FLOWER.

SPIKES moſtly three, remote, half the length of the male one, oblongo-ovate, moſtly four-flowered, ſtanding on flower-ſtalks, and furniſhed with bracteæ. FLOWER-STALKS compreſſed, thickened above. BRACTEÆ reſembling the leaves, higher than the ſtalk.

CALYX: SCALE lanceolate, acute, green at the back, the ſides white, ſhining, *fig.* 3.

NECTARY: oblong, the outſide convex, the inſide concave, cloſely ſurrounding the piſtillum, *fig.* 4.

PISTILLUM: GERMEN obovate, within the nectary, *fig.* 5. STYLE double the length of the germen, *fig.* 6. STIGMATA three, ſpreading, villous, *fig.* 7.

PERICARPIUM: a CAPSULE three-cornered, gibbous, ſtriated, turgid, pointed at both ends, with a beak membranaceous at the point, *fig.* 8.

SEEDS ſingle, large, convex on one ſide, flattiſh on the other, *fig.* 9. within the nectary.

My much-valued friend, the Rev. Dr. GOODENOUGH of Ealing, has the merit of diſcovering the Carex here figured; we were herbarizing together, in company with the Rev. Dr. WHITFIELD, in a ſmall wood at the back of Charlton Church, when a ſingle plant of it firſt caught his eye, and on further ſearch we found it in one part of the wood in abundance; Mr. DICKSON informs me that he has obſerved the ſame ſpecies growing wild near Godalming, Surrey; and we are informed that it has alſo been found by Mr. SOLE, of Bath.

The late Rev. Mr. LIGHTFOOT, who had ſeen it growing with me, was pleaſed to call it *depauperata*, from the paucity of its flowers, a name in which we ſometime acquieſced; but, on maturer conſideration, we think the name we have now given it more expreſſive of its principal character.

It affects the ſame ſituation as the *ſylvatica*, to which, in its foliage, it bears ſome little reſemblance, but when it comes to ſhew its ſeed-veſſels it cannot eaſily be miſtaken for any other Britiſh Carex.

It flowers about the latter end of May, but is moſt conſpicuous towards the middle of June, when its ſeed-veſſels are advanced.

URTICA DIOICA. COMMON NETTLE.

URTICA. *Linn. Gen. Pl.* MONOECIA TETRANDRIA.

MASC. *Cal.* 4-phyllus. *Cor.* 0. *Nectarium* centrale, cyathiforme,

FEM. *Cal.* 2-valvis. *Cor.* 0. *Sem.* 1. nitidum.

Rau Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS.)

URTICA *dioica*, foliis oppositis cordatis, racemis geminis. *Linn. Syst. Veg. p.* 849. *Spec. Pl.* 1396. *Fl. Suec.* 863. *Scopoli Fl. Carn. ed.* 2. *n.* 1175.

URTICA stirpibus sexu distinctis, foliis serratis, ovato-lanceolatis, productis. *Hall. Hist.* 1614.

URTICA major vulgaris. *J. Bauh. III.* 445. major vulgaris et media sylvestris. *Park.* 440. urens. *Ger emac.* 706. maxima, *Bauh. Pin.* 232.

URTICA racemifera major perennis. *Raii Syn. p.* 139. Common Stinging-Nettle. *Hudf. Fl. Angl, p.* 418, *Lightf. Fl. Scot, p.* 578.

RADIX perennis, repens, teretiuscula, subsulcata, tenax, flavescens, geniculata, fibras majusculas e geniculis emittens.

ROOT perennial, creeping, roundish, slightly furrowed, tough, yellowish, jointed, sending down from the joints some pretty large fibres.

CAULES plures, bi ad quadripedales, erecti, vix ramosi, obtuse tetragoni, quadrisulcati, pilis rigidis hispidi.

STALKS many, from two to four feet high, upright, very little branched, bluntly quadrangular, each side furrowed, beset with rigid hairs.

FOLIA opposita, petiolata, cordata, acuminata, late serrata, supra rugosa, venosa, utrinque pilis subulatis, urentibus hispida.

LEAVES opposite, standing on foot-stalks, heart-shaped, acuminated, widely serrated, the upper side wrinkled and veiny, on both sides beset with awl-shaped, stinging hairs.

STIPULÆ quatuor, patentes, lineares, obtusiusculæ, subtus compresso-canaliculatæ.

STIPULÆ four, spreading, linear, bluntish, the under side compressed and channelled.

FLORES dioici, in racemis quaternis, ramosis, deflexis, pubescenti-hispidis, glomeratim dispositi.

FLOWERS dioicous, dispersed in small clusters, in racemi growing four together, which are branched, bending downward, and beset with fine as well as coarse hairs.

MASCULI FLORES.

CALYX: PERIANTHIUM quadripartitum, laciniis patentibus, ovatis, obtusis, concavis, subtus scabris, *fig.* 1.

COROLLA nulla.

NECTARIUM in centro floris, turbinatum, subdiaphanum, apice obtusum, perforatum,

STAMINA: FILAMENTA quatuor, subulata, longitudine calycis, patentia, intra singulam laciniam calycinam singula, instante anthesi elastice prosilientia. ANTHERÆ biloculares, albæ, *fig.* 2.

MALE FLOWERS.

CALYX: a PERIANTHIUM divided into four segments, spreading, ovate, obtuse, concave, beneath roughish, *fig.* 1.

COROLLA none.

NECTARY in the centre of the flower, turbinated, almost transparent, blunt and perforated at the top.

STAMINA: four FILAMENTS awl-shaped, length of the calyx, spreading, one in each segment of the calyx, on shedding of the pollen springing out by their elasticity. ANTHERÆ bilocular, whitish, *fig.* 2.

FEMINEI FLORES.

CALYX: PERIANTHIUM quadripartitum, persistens; laciniis duabus interioribus majoribus, germen cingentibus; duabus exterioribus minimis, patentibus, *fig.* 3.

COROLLA nulla.

PISTILLUM: GERMEN ovatum. STYLUS nullus. STIGMA patens, penicilliforme, album, *fig.* 4, 5.

PERICARPIUM nullum. *Calycis* laciniæ internæ, conniventes, *fig.* 6. includunt.

SEMEN unicum, ovatum, obtuso-compressum, nitidum, *fig.* 7, 8.

FEMALE FLOWERS.

CALYX: a permanent PERIANTHIUM divided into four segments; the two inner ones larger, surrounding the germen; the two outer ones very small, spreading, *fig.* 3.

COROLLA none.

PISTILLUM: GERMEN ovate. STYLE none. STIGMA spreading, feathery, white, *fig.* 4, 5.

SEED-VESSEL none. The two inner segments of the *Calyx* closing and including the seed, *fig.* 6.

SEEDS single, ovate, blunt, compressed, whitish, shining, *fig.* 7, 8.

The name of *dioica* is given to this species of Nettle, from its producing male flowers on one plant, and female on another; it is however not always dioicous, as we have frequently observed female flowers on the male plant in great numbers.

It grows abundantly by the sides of hedges, in neglected fields, gardens, and pastures, and flowers from June to September.

Baron HALLER has observed, that in its fructification it has great affinity with the *Parietaria*, which is certainly just; the pollen in particular is discharged in the same curious way. (See Parietar. offic. already figured.)

The genus Urtica is a numerous one, there being twenty-eight species enumerated in the 14 ed. of LINNÆUS's *Systema Vegetabilium;* all of which however do not sting, as the three species indigenous to this country are well known to do: the naked eye readily perceives the instruments by which the Nettle instils its poison; a microscope of no great magnifying power more plainly discovers them to be rigid, transparent, tubular setæ, prickles, or stings, highly polished and exquisitely pointed, furnished at their base with a kind of bulb, in which the juice is principally contained, and which being pressed on when the sting enters the skin, forces the poison into the wound; of the venomous quality of this liquid, and of the manner in which it is emitted, I have had ocular proof: placing the footstalk of a Nettle leaf * (the prickles being more manageable, and better adapted to the microscope than those on the leaves or stalks) on the stage of the microscope, so that the whole of the prickle was in the focus when horizontally extended, I pressed on the bulb with a blunt-pointed pin, and, after some trials, found a liquid to ascend in the prickle, somewhat as the quicksilver does when a warm hand is applied to the

* The Urtica pilulifera was the one made use of.

Urtica dioica

Pub. Jan.y 1. 1798 by W. Curtis S.t George's Crescent

Urtica urens

Pub. June 1. 1795 by V. Curtis. S. Greenyus Leofens

the bulb of a thermometer: in ſome of the prickles I obſerved the liquid ſtationary, on preſſing ſuch in particular I ſaw moſt plainly the liquor aſcend to, and flow copiouſly from its very extremity, ſee *fig.* 9. I was the more anxious to ſee this, as I ſuſpected the poiſon might proceed from an aperture in the ſide of the ſting, near the point, as in the forceps of the ſpider, and tooth of the viper, and where it appears to be placed, rather than at the extremity, that it may not take off from its neceſſary ſharpneſs.

Pricking the ſkin of my hand with a needle, I placed ſome of the juice on the wound, when it inſtantly inflamed, and put on all the appearance of a part ſtung by a Nettle.

It has been obſerved, that ſuch as handle this plant roughly, rarely feel the effects of its ſting; while others, from ſlightly touching it, experience it in all its force; this circumſtance is happily expreſſed by AARON HILL:

> " *Tender-handed ſtroke a Nettle,*
> " *And it ſtings you for your pains;*
> " *Graſp it like a man of mettle,*
> " *And it ſoft as ſilk remains.*"

Notwithſtanding its roughneſs and ſtinging quality, many of the poorer people ſeek Nettle-tops in the ſpring with great avidity, as a pot-herb, neglecting the more luxuriant Chickweed, almoſt equal to ſpinach, growing perhaps abundantly juſt by it; others religiouſly put them in diet-drinks at the ſame period, expecting to have their whole maſs of blood ſo purified as to be free from diſeaſe for twelve months at leaſt.

Mr. LIGHTFOOT informs us in his *Fl. Scot.* that in Arran, and other iſlands of Scotland, a rennet is made of a ſtrong decoction of Nettles; a quart of ſalt is put to three pints of the decoction, and boiled up for uſe; a common ſpoonful of this liquor will coagulate a large bowl of milk very readily, and agreeably, as he law and experienced.

The ſtalk of the Nettle is found to have a texture ſomewhat like that of Hemp, and to be capable of being manufactured into cloth, ropes, and paper.

The old writers on the Materia Medica, are profuſe in their encomiums on the virtues of the Nettle, as they are on thoſe of moſt other plants; but, excepting the benefit which may ariſe from its external application, its virtues we apprehend are extremely problematical.

Urtication, or whipping with Stinging-Nettles, is an old practice, and recommended in various diſorders, eſpecially lethargy, palſy, or numbneſs of any particular limb, rheumatic pains, &c.

The Nettle is refuſed by cattle in general; hence we often ſee paſtures, orchards, &c. diſfigured by large patches of them, which, as the root is perennial and creeping, are every year increaſing; the agriculturiſt who wiſhes to improve and embelliſh his fields, will loſe no time in extirpating ſuch. There are ſome, however, who think differently of this plant; HALLER ſays, that it affords excellent food for cattle, eſpecially milch cows; that it has even been cultivated, and that advantageouſly, in Sweden for feeding kine. *Hall. Hiſt. p.* 287.

Though this plant is not remarkably advantageous either to man or beaſt, it affords nouriſhment to a great number of inſects; it is the only food of the caterpillars of three of our moſt beautiful Butterflies, viz. the *Atalanta*, *Paphia*, and *Urticæ*, the principal food of a fourth, the *Io*, which I have this year found alſo on the Hop, and the occaſional food of a fifth, the *C. album*, which feeds alſo on the hop and the elm; two of our moths alſo feed on it, viz. the *urticata* and the *verticalis*; beſides theſe, which are the principal inſects found on the Nettle with us, a great number of other indiſcriminate feeders devour its foliage. The baſe of the leaves in autumn is extremely liable to be diſfigured by tubercles, which, if opened, are found to contain ſmall maggots, which probably produce the *Muſca Urticæ* of LINNÆUS; but of this we hope to ſpeak with more certainty when we treat of the Urtica pilulifera.

URTICA URENS. SMALL NETTLE.

URTICA *urens* foliis oppoſitis ovalibus. *Linn. Syſt. Veg. p.* 849. *Spec. Pl. p.* 1396. *Fl. Suec.* 863. *Scopoli Fl. Carn. ed.* 2. *n.* 1174.

URTICA ſexubus ſede disjunctis, foliis ovato-lanceolatis, julis oblongis. *Hall. Hiſt.* 1615.

URTICA minor. *Ger. emac.* 707. minor annua. *J. Bauh. III.* 446. urens minor. *Bauh. Pin.* 232. racemifera minor annua. *Raii Syn. p.* 140. The leſſer Stinging-Nettle. *Hudſ. Fl. Angl. p.* 417. *Lightf. Fl. Scot. p.* 578.

Differt a dioica, planta tertia parte humiliore; floribus monoicis; radice annua, alba; caulibus ramoſioribus; foliis multo minoribus et rotundioribus; ſtipulis vix conſpicuis; racemis multo brevioribus, minuſque ramoſis.

Differs from the dioica, in being ſcarcely one-third as tall; having male and female flowers on the ſame plant; the root annual, white; ſtalks much branched; leaves much ſmaller and rounder; ſtipulæ leſs conſpicuous; racemi much ſhorter in proportion.

There appears to be no reaſon for applying the term *urens* to this ſpecies in particular, as ſeveral of the others are equally pungent.

Of annual weeds, this Nettle is one of the very worſt, eſpecially in light, manured ſoils, each plant producing an immenſe number of ſeeds, and that in a ſhorter time than moſt others: PARKINSON obſerves, that it will " beare ripe ſeed twiſe in one year;" the young plants are therefore to be cut up with the hoe as ſoon as they appear. The great advantage of early hoeing cannot be too ſtrongly impreſſed on the minds of Farmers and Gardeners.

Reference to the Parts of Fructification.

Fig. 1. the Calyx of the female flower. *Fig.* 2. the Calyx of the male flower. *Fig.* 3. the Stamina. *Fig.* 4. the Piſtillum. *Fig.* 5. the Seed. *Fig.* 6. the ſame magnified.

AIRA CARYOPHYLLEA. SILVER HAIR-GRASS.

AIRA. *Linn. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, 2-florus. *Floſculi* abſque interjecto rudimento.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

AIRA *caryophyllea*, foliis ſetaceis, panicula divaricata, floribus ariſtatis diſtantibus. *Linn. Syſt. Vegetab. p.* 112. *Sp. Pl. p.* 97.

AVENA diantha, foliis ſetaceis, panicula divaricata. *Haller Hiſt. n.* 1482.

AIRA foliis ſetaceis, panicula trichotoma, floribus ariſtatis divergentibus. *Hudſon Fl. Angl. ed.* 2. *p.* 36.

CARYOPHYLLUS arvenſis glaber minimus. *Bauh. Pin.* 210.

GRAMEN paniculatum purpuro-argenteum, locuſtis parvis annuum. *Hiſt. Ox. III.* 200. *t.* 5. *f.* 11.

GRAMEN paniculatum, locuſtis purpuro-argenteis annuum. *Raii Syn. p.* 407. Small annual fair-panicled Graſs.

RADIX annua, fibroſa, fibris paucis, in terram vix deſcendentibus, unde plantula venti impetu facile eruitur.

ROOT annual, fibrous, fibres few, penetrating but a little way into the earth, whence the plant by the violence of the wind, is eaſily forced out of the ground.

CULMUS erectus, ſpithamæus, et ultra, teres, ſtriatus, foliatus, bitrinodis.

STALK upright, about a ſpan high, round, ſtriated, leafy, with two or three joints.

FOLIA ſetacea, brevia, rigidula, convoluta, erecta, glauca, obtuſiuſcula: *Vaginæ* longæ, ſtriatæ, ſcabriuſculæ, marginibus membranaceis albidis; *Membrana* magna, acuminata, demum bifida.

LEAVES ſetaceous, ſhort, ſomewhat rigid, the edges rolled in, upright, glaucous, a little blunt: *Sheaths* long, ſtriated, roughiſh, the edges membranous and white; the *Membrane* large, long-pointed, finally bifid.

PANICULA divaricata; *Pedunculi* ſolitarii, in culta planta plerumque gemini, longi, ramoſi, trifidi, glabri; *Pedicelli* breves, parum flexuoſi; *Flores* diſtantes.

PANICLE divaricated; *Peduncles* growing ſingly, in the cultivated plant uſually two together, long, branched, trifid, and ſmooth; *Pedicles* ſhort, ſomewhat crooked; *Flowers* diſtant.

CALYX: *Gluma* biflora, bivalvis, valvulis ovato-lanceolatis, acutis, æqualibus, albidis, nitidis, baſi ſubpurpuraſcentibus, *fig.* 1.

CALYX: a *Glume* of two flowers, two-valved, the valves ovato-lanceolate, acute, equal, whitiſh, gloſſy, purpliſh at the baſe, *fig.* 1.

COROLLA bivalvis, valvulæ ſeſſiles, ſubæquales, calyce vix breviores, vireſcentes, acutæ, exteriore ariſtata, *fig.* 2. *Ariſta* prope baſin egrediens, recta, alba, calyce dimidio longior, *fig.* 3.

COROLLA two-valved, valves ſeſſile, nearly equal, a little ſhorter than the calyx, greeniſh, pointed, the outer one awned, *fig.* 2. *Awn* proceeding from near its baſe, ſtraight, white, longer by one half than the calyx, *fig.* 3.

STAMINA: FILAMENTA 3, capillaria, longitudine fere floris; ANTHERÆ oblongæ, utrinque furcatæ, *fig.* 4.

STAMINA: 3 capillary FILAMENTS, nearly the length of the flower; ANTHERÆ oblong, forked at each end, *fig.* 4.

PISTILLUM: GERMEN ovatum; STYLI 2, patentes, plumoſi, *fig.* 5.

PISTILLUM: GERMEN ovate; STYLES 2, ſpreading, and feathery, *fig.* 5.

SEMEN ſubovatum, tectum, *fig.* 6. denudatum.

SEED ſomewhat ovate, covered with the corolla, *fig.* 6. denuded.

The *Aira caryophyllea* is found with us in ſituations nearly ſimilar to thoſe of the *Aira præcox*, already figured, viz. on ſandy, barren heaths, and ſometimes in fallow fields; it is not, however, to be met with in the ſame profuſion, nor to be found with the ſame certainty.

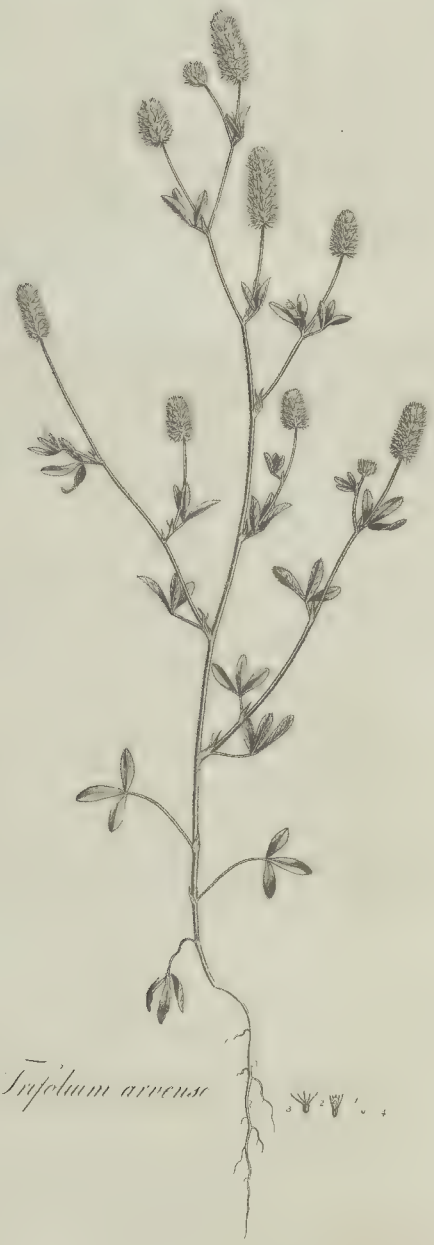
It flowers in May and June, and as it is an annual, unleſs it be ſought for about its flowering ſeaſon, it will not eaſily be diſcovered.

Our figure repreſents the plant as it is uſually found in its wild ſtate; in richer ſoils it grows much larger, and in tufts of a conſiderable ſize.

We have no other Aira for which it can eaſily be miſtaken, the *flexuoſa* which frequently grows in the ſame ſituations is a perennial, and uſually twice or thrice as high, its ſpiculæ alſo are larger, and more ſilvery, the *præcox* on the contrary is a ſmaller plant, and has a much cloſer panicle.

We never could diſcover the propriety of Mr. STILLINGFLEET's figuring this plant among his graſſes; what has ſuch a very inſignificant annual to do with the improving of meadows and paſtures?

Aira
caryophyllea



Trifolium arvense

TRIFOLIUM ARVENSE. HARE'S-FOOT TREFOIL.

TRIFOLIUM. *Linn. Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *arvenſe* ſpicis villoſis ovalibus, dentibus calycinis ſetaceis villoſis æqualibus. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 689. *Sp. Pl. p.* 1083. *Fl. Suec. n.* 668.

TRIFOLIUM caule ramoſo, foliis lanceolatis ſerratis, ſpicis villoſis ovatis. *Hall. Hiſt. n.* 373.

TRIFOLIUM *arvenſe. Scopoli Fl. Carn. p.* 83. *v.* 2.

TRIFOLIUM arvenſe humile ſpicatum ſ. Lagopus. *Bauh. Pin.* 328.

LAGOPUS trifolius. *J. Bauh. Hiſt.* 2. *p.* 377.

LAGOPUS ſive Pes Leporis. *Ger. emac.* 1193.

LAGOPUS vulgaris. *Park.* 1107. *Raii Syn. p.* 330.

Hare's-Foot or Hare's-Foot Trefoil. *Hudſon Fl. Angl. ed.* 2. *p.* 326. *Lightfoot Fl. Scot. p.* 406.

RADIX annua, fuſiformis, ſimplex, albida.

ROOT annual, tapering, ſimple, whitiſh.

CAULIS pedalis, ſuberectus, ramoſus, teres, læviuſculus, pilis crebris, mollibus, albis, canescens.

STALK about a foot high, nearly erect, branched, round, ſmoothiſh, grey, with numerous ſoft white hairs.

RAMI alterni, breviuſculi, patulo-erecti.

BRANCHES alternate, ſhortiſh, betwixt upright and ſpreading.

FOLIA ternata; foliola æqualia, oblongo-obovata, emarginata, leviter ſtriata, piloſa.

LEAVES growing three together, equal, oblong-obovate, emarginate, faintly ſtriated, hairy.

STIPULÆ bicuſpidatæ, apicibus ſubulatis, ſtriatæ, ſtriis interdum rubris.

STIPULÆ two-pointed, tips awl-ſhaped, ſtriated, veins ſometimes red.

FLORES parvi, albi, in capitulis terminalibus, ſubovalibus, piloſiſſimis, cano-carneis.

FLOWERS ſmall, white, in terminal heads ſomewhat oval, very hairy, of a greyiſh fleſh colour.

CALYX: PERIANTHIUM tubulatum, 5-dentatum, piloſiſſimum, albidum, dentibus ſubæqualibus, longitudine tubi, ſetaceis, rubris, *fig.* 1. pili cani ſub microſcopio recti, longiſſimi.

CALYX: a tubular PERIANTHIUM of five teeth, very hairy, whitiſh, teeth nearly equal, as long as the tube, briſtle-ſhaped, and red, *fig.* 1. the hairs grey, magnified appear ſtraight, and very long.

COROLLA papilionacea, calyce brevior, alba; VEXILLUM obovatum, obſolete crenulatum; ALÆ anguſtæ, dimidio breviores; CARINA obtuſa alis brevior, *fig.* 2.

COROLLA papilionaceous, ſhorter than the calyx; STANDARD obovate, faintly notched: WINGS narrow, ſhorter by one half, KEEL obtuſe, ſhorter than the wings, *fig.* 2.

STAMINA diadelpha, ſimplex et novemfidum, ANTHERÆ ſimplices.

STAMINA in two bodies, one ſingle, nine united; ANTHERÆ ſimple.

PISTILLUM: GERMEN ſubovatum; STYLUS ſubulatus, aſcendens; STIGMA ſimplex.

PISTILLUM: GERMEN ſubovate; STYLE tapering, aſcending; STIGMA ſimple.

SEMEN ſubovatum, glabrum, vireſcens, calyce tectum, *fig.* 3. excerptum, *fig.* 4.

SEED ſomewhat ovate, ſmooth, greeniſh, covered by the calyx, *fig.* 3. taken out, *fig.* 4.

The *Trifolium arvenſe*, though not to be found in every walk that one takes about London, is common enough in ſandy, and gravelly ſoils, and in light arable lands, which it chiefly affects; we have obſerved it moſt frequently about Charlton; in the ſand pits behind the Church it may be found with certainty.

There is ſcarcely any tribe of plants which vary more in their inflorescence than the Trefoils (ſee the ſeveral ſpecies figured in this work) the *arvenſe* differs remarkably from all our others, the flowers growing in ſoft, oblong, hairy heads, of a light colour, which have a moſt pleaſing appearance, and render the plant very conſpicuous, it is from theſe, as is well known, it has very generally acquired the name of Hare's-Foot.

From what we have obſerved, the ſeeds in many of the ſpecies of this genus are not ſcattered abroad as in moſt of the leguminous plants, but vegetate in the heads as they lie on the ground; we have noticed this œconomy in the preſent as well as other ſpecies; how far the whole genus is ſubject to it deſerves inquiry.

LINNÆUS in his *Flor. Suec.* conſiders the *Lagopus perpuſillus ſupinus perelegans maritimus Lobelii of Ray's Synopſis, p.* 330. *t.* 14. *f.* 2. as a variety merely, having found it to have an annual root, and to become like the other on being cultivated.

GERANIUM DISSECTUM. JAGGED CRANE'S-BILL.

GERANIUM. *Linn. Gen. Pl.* MONADELPHIA DECANDRIA.

Monogyna. Stigmata 5. *Fructus* roſtratus, pentacoccus.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *diſſectum* pedunculis foliо brevioribus, foliis quinquepartito-trifidis multifidiſque, petalis, emarginatis, arillis villoſis. *L'Herit. Ger. Ait. Hort. Kew. vol.* 2. *p.* 437.

GERANIUM *diſſectum* pedunculis biflоris, foliis quinquepartito-trifidis, petalis emarginatis, longitudine calycis, arillis villoſis. *Linn. Syſt. Veg. p.* 618. *Spec. plant. p.* 956. *Flor. Suec.* 622. *Scopoli Fl. Carn. ed.* 2. *n.* 848. *Hudſon Fl. Angl. p.* 304. *Lightfoot Fl. Scot.* 371.

GERANIUM caule erecto, foliis quinquelobis, lobis trifidis acutis. *Hall. Hiſt.* 937.

GERANIUM foliis imis uſque ad pedunculum diviſis. *Vaill. Pariſ. tab.* 15. *f.* 2.

GERANIUM malacoides *ſ.* columbinum alterum. *Parkinſon* 706. Columbinum majus diſſectis foliis. *Ger. em.* 938. *Raii Syn.* 359. Dove's-foot Crane's-bill, with jagged leaves.

RADIX annua, teres, ſubfibroſa, fuſca.

CAULES plures, ſubpedales, patentes, teretiuſculi, pallide virides, hinc rubentes, pilis crebris, brevibus, albis, deorſum ſpectantibus, obſiti, nodoſi, ramoſi, ramis alternis, divaricato-patulis.

FOLIA oppoſita, longe petiolata, quinquepartita, laciniis tri-ſexfidis, diſtantibus, linearibus, inæqualibus, acutiuſculis, venoſis, utrinque pilis ſurſum ſpectantibus inſtructis, margine apiceque rubris, ſinubus obtuſis. Laciniæ foliorum radicalium magis approximatæ et obtuſiores, petiolis divaricato-patulis, compreſſiuſculis, uti caulis piloſis.

STIPULÆ bilobæ, baſi lata, albida, lobis ſemicordatis, acuminatis, rubris, nitentibus, linea dorſali albida, margineque ciliatis.

FLORES parvi, purpureo-rubri.

PEDUNCULI biflori, foliis breviores.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-oblongis, trinervibus, ariſtatis, pilis glanduloſis obſitis, *fig.* 1.

COROLLA calyce paulo brevior. PETALA quinque, oblongo-obcordata, emarginata, *fig.* 2.

NECTARIUM: GLANDULÆ quinque virides, cum petalis alternantes, *fig.* 3.

STAMINA: FILAMENTA decem, germen cingentia. ANTHERÆ ſubovatæ, cœruleæ, *fig.* 4.

PISTILLUM: GERMEN pentagonum, roſtratum, pilis glanduloſis veſtitum. STYLUS cylindricus, perſiſtens. STIGMA quinquefidum, rufeſcens, *fig.* 5.

SEMINA arillata. ARILLUS villoſus, *fig.* 6.

ROOT annual, round, ſomewhat fibrous, brown.

STALKS many, about a foot long, ſpreading, roundiſh, of a pale green, here and there reddiſh, beſet with a number of white, ſhort hairs, pointing downwards; jointed, branched; the branches alternate, divaricated, ſpreading.

LEAVES oppoſite, on long footſtalks, deeply divided into five ſegments, which are again divided into from three to ſix ſmaller ones, diſtant, linear, unequal, ſomewhat pointed, veiny, on both ſides beſet with hairs pointing upwards, their edge and tips red, the ſinuſſes obtuſe. The ſegments of the radical leaves approach nearer to each other, and are more obtuſe, footſtalks ſpreading, a little flattened, hairy like the ſtalk.

STIPULÆ compoſed of two lobes, with a broad white baſe, the lobes ſemicordate, acuminated, red, ſhining, having a whitiſh line on the back, which together with the margin is edged with hairs.

FLOWERS ſmall, of a purpliſh red colour.

PEDUNCLES two-flower'd, ſhorter than the leaves.

CALYX: a PERIANTHIUM with five, ovato-oblong, three-rib'd, awned leaves, beſet with glandulous hairs, *fig.* 1.

COROLLA a little ſhorter than the calyx. PETALS five, oblongo-obcordate, emarginated, *fig.* 2.

NECTARY: five green glandules, placed alternately with the petals, *fig.* 3.

STAMINA: ten FILAMENTS ſurrounding the germen. ANTHERÆ nearly ovate, blue, *fig.* 4.

PISTILLUM five-corner'd, beaked, beſet with glandulous hairs. STYLE cylindrical permanent. STIGMA quinquefid, reddiſh, *fig.* 5.

SEEDS covered with a villous ARILLUS, *fig.* 6.

We have figured this ſpecies in the ſtate we uſually find it among the herbage, on the borders of meadows and paſtures; a ſituation which with us it very much affects; of courſe it is more drawn up than when it grows ſingly, which it frequently does by road ſides, and in fallow fields.

It flowers in May and June.

It varies greatly in ſize, and we have ſeen it with white and fleſh coloured bloſſoms.

It can ſcarcely be miſtaken for any of the other Britiſh ſpecies; we may remark, however, that it is not only diſtinguiſhed by its finely divided leaves, but that its bloſſoms (uſually of a bright colour) being furniſhed with very ſhort footſtalks, appear ſitting as it were among the leaves; the petals alſo are uſually ſhorter than the calyx by the awns of the latter, which are unuſually long; the calyx, but more particularly the ſtyle, which becomes the roſtrum, is thickly covered with viſcid hairs; the hairs on the ſtalk afford likewiſe a good diſtinction, as they do not ſpread horizontally as in many of the other ſpecies, but obviouſly point downward, which is accurately noticed in Monſ. VAILLANT's figure.

Geranium dissectum

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. Melissa . Nepeta .

MELISSA NEPETA. FIELD CALAMINT.

MELISSA. *Linn. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Calyx aridus, ſupra planiuſculus: labio ſuperiore ſubfaſtigiato. *Corollæ* labium ſuperius ſubfornicatum, bifidum, lab. inf. lobo medio cordato.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

MELISSA *Nepeta* pedunculis axillaribus dichotomis folio longioribus, caule adſcendente hirſuto. *Linn. Syſt. Veg. p.* 542. *Spec. Pl. p.* 828.

MELISSA foliis hirſutis ovatis acuminatis, leniter ferratis, petiolis ramoſis, folia ſuperantibus. *Hall. Hiſt. n.* 240.

CALAMINTHA Pulegii odore *ſ.* Nepeta. *Baub. Pin.* 228.

CALAMINTHA odore Pulegii. *Gerard. emac.* 687.

CALAMINTHA altera odore Pulegii, foliis maculoſis. *Parkinſ.* 36. *Raii Syn. p.* 243. Field Calamint. *Hudſon Fl. Angl. p.* 264.

RADIX perennis, ſubobliqua, teres, flexuoſa, lignoſa, fuſca.

CAULIS lignoſus, mox ſupra baſin diviſus in ramos elongatos, pedales ad bipedales, aſcendentes, obſolete tetragonos, inferne rufeſcentes, pilis mollibus, horizontalibus obſitos.

FOLIA oppoſita, remotiuſcula, breve petiolata, vix pollicaria, patentiſſima, ſubcarinata, apice reflexa, late ovata, fere cordata, obtuſiuſcula, ferrata, margine revoluta, ſubundulata, venoſo-rugoſa, mollia, utrinque villoſa, pallide viridia.

FLORES verticillati, pallide cœrulei, ante explicationem flaveſcentes, odoris uti tota planta aromatici.

VERTICILLI dimidiati, foliis altiores, pauciflori.

BRACTEÆ paucæ, parvæ, ſubulatæ.

PEDUNCULI communes duo, axillares, dichotomo-ramoſi, 4-6 flori. *Pedicelli* inæquales, erecti.

CALYX: PERIANTHIUM monophyllum, tubulatum, perſiſtens, quindecimſtriatum, piloſiuſculum, quinquedentatum, dentibus acuminatis, utrinque hirſutis, inferioribus duobus longioribus, anguſtioribus. Striæ denteſque fuſco-purpuraſcentes, *fig.* 1.

COROLLA monopetala, ringens, calyce longior, piloſiuſcula. TUBUS cylindraceus, albidus. FAUX dehiſcens, barbata. LABIUM ſuperius brevius, erectiuſculum, profunde emarginatum, ſubcordatum, dorſo plicatum: inferius trifidum, undulatum, lacinia media majori, *fig.* 2.

STAMINA: FILAMENTA quatuor, teretia, albida, corolla breviora, duo breviora. ANTHERÆ biloculares, violaceæ. POLLEN album, *fig.* 3.

PISTILLUM: GERMEN quadrifidum, baſi glandula nectarifera fulvente cinctum. STYLUS filiformis, purpuraſcens, corollæ longitudine, cum ſtaminibus ſub labio ſuperiore corollæ inclinatus. STIGMA tenue, bifidum, reflexum, *fig.* 4.

PERICARPIUM nullum. Calyx immutatus in ſinu ſemina fovens.

SEMINA quatuor, ovata.

ROOT perennial, ſomewhat oblique, crooked, round, woody, brown.

STALK woody, divided juſt above the baſe into branches, which are from one to two feet in length, aſcending, faintly quadrangular, reddiſh towards the baſe, beſet with ſoft, horizontal hairs.

LEAVES oppoſite, rather remote, ſitting on ſhort footſtalks, ſcarcely an inch long, ſpreading, ſlightly keel'd, reflexed at the point, of a broad ovate, almoſt heart-ſhaped figure, bluntiſh, ferrated, the margin rolled back, and ſlightly waved, wrinkled, ſoft, villous on both ſides, of a pale green colour.

FLOWERS placed in whorls, pale blue, before they expand yelloviſh, poſſeſſing like the whole plant a pleaſant aromatic ſmell.

WHORLS growing in halves, longer than the leaves, few-flowered.

BRACTEÆ few, ſmall, awl-ſhaped.

COMMON PEDUNCLES two out of the alæ of the leaves, branched, bearing four or ſix flowers. *Partial Peduncles* unequal, upright.

CALYX: a monophyllous PERIANTHIUM, tubular, permanent, ſlightly hairy, with fifteen ſtriæ, and five teeth, which are acuminated, on both edges hairy, the two inferior ones longer and narrower. The ſtriæ and teeth of a brown purpliſh colour, *fig.* 1.

COROLLA monopetalous, gaping, longer than the calyx, ſlightly hairy. The TUBE cylindrical, whitiſh. Mouth of the tube bearded. The UPPER LIP ſhorter, almoſt upright, deeply emarginated, nearly obcordate, at the back folded. The UNDER LIP trifid, waved, the middle ſegment larger than the others.

STAMINA: four round whitiſh FILAMENTS ſhorter than the corolla, two of them ſhorter than the reſt. ANTHERÆ bilocular, violet-coloured. POLLEN white, *fig.* 3.

PISTILLUM: GERMEN quadrifid, at the baſe ſurrounded with a nectariferous, orange-coloured GLANDULE. STYLE thread-ſhaped, purpliſh, the length of the corolla, turned in along with the ſtamina, under the upper lip of the corolla. STIGMA ſlender, bifid, reflexed, *fig.* 4.

PERICARPIUM none. The calyx unaltered contains the ſeeds.

SEEDS: four, ovate.

This ſpecies of Meliſſa affects dry, chalky ſoils, and is frequent in many parts of Kent by road ſides, and in uncultivated places; we find it in tolerable abundance in the old ſand-pits at the back of Charlton church, where it flowers in July, Auguſt, and September.

Students are apt to miſtake it for the *Meliſſa Calamintha*, from which it differs eſſentially in many reſpects, which we ſhall particularize when that plant comes to be figured.

It is worthy of notice on account of its fragrance; it is moreover a medicinal plant.

The whole herb has a ſtrong aromatic ſmell, approaching to that of Pennyroyal, and a moderately pungent taſte, ſomewhat like that of Spearmint, but warmer; in virtue it appears to be nearly ſimilar to a mixture of theſe herbs; infuſions of the leaves are drank as tea in weakneſſes of the ſtomach, flatulent cholics, and uterine obſtructions. *Lewis's Mat. Med. ed. Aik. p.* 172.

ANEMONE APENNINA. MOUNTAIN ANEMONE.

ANEMONE. *Linn. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 0. *Petala* 6-9. *Sem.* plura.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ANEMONE *apennina* ſeminibus acutis, foliolis inciſis, petalis lanceolatis numeroſis. *Linn. Syſt. Veg. ed.* 14. *Murr. p.* 511. *Spec. Pl. ed.* 3. *p.* 762. *Hudſon Fl. Angl. ed.* 2. *p.* 237.

ANEMONE geranii robertiani folio cærulea. *Bauh. Pin.* 174.

RANUNCULUS nemoroſus, flore cæruleo, apennini montis. *Mentz. pug. t.* 8. *f.* 2.

ANEMONE hortenſis tenuifolia, ſimplici flore 1. *Cluſ. Hiſt.* 1. *p.* 254.

ANEMONE Geranifolia. Storke's-bill Winde-flower. *Ger. Herb. p.* 304. *fig.* 7.

RANUNCULUS nemoroſus flore purpureo cæruleo. The ſingle purple wood Crowfoote. *Park. Th. p.* 325. *Raii Syn. ed.* 3. *p.* 259.

RADIX perennis, tuberoſa, craſſitie minimi digiti, difformis, fuſca.

ROOT perennial, tuberous, the thickneſs of the little finger, irregular in its ſhape, and of a brown colour.

CAULIS teres, glaber, purpuraſcens, uniflorus, ſpithamæus.

STALK round, ſmooth, purpliſh, about a ſpan high, ſupporting a ſingle flower.

FOLIA radicalia ternata, petiolata, foliolis tripartitis, laciniis inciſis, acutiuſculis, utrinque piloſis; folium caulinum pedunculo ſubjectum (ſive involucrum) ſeſſile, ter aut quaternatum, foliolis uti in folio radicali.

LEAVES from the root growing three together, ſtanding on foot-ſtalks, ſmall leaves tripartite, ſegments inciſed, ſomewhat pointed, hairy on both ſides; the ſtalk-leaf placed under the peduncle (or involucrum) ſeſſile, compoſed of three or four leaves, ſmall leaves as in thoſe from the root.

FLOS erectus, pallide cæruleus, odore ſuavi.

FLOWER upright, of a pale blue colour, and ſweet ſmell.

PEDUNCULUS ſubpalmaris, teres, piloſus, ſubpurpuraſcens, juxta florem viridis.

FLOWER-STALK about a hand's breadth in length, round, hairy, purpliſh, cloſe to the flower green.

CALYX nullus.

CALYX wanting.

COROLLA: PETALA 12 ad 15, in tres ordines diſpoſita, oblonga, *fig.* 1.

COROLLA: PETALS from 12 to 15, diſpoſed in three rows, of an oblong ſhape, *fig.* 1.

STAMINA: FILAMENTA numeroſa, inæqualia, capillaria, alba; ANTHERÆ erectæ, didymæ, flaventes, *fig.* 2.

STAMINA: FILAMENTS numerous, unequal, capillary, white; ANTHERÆ upright, double and yellowiſh, *fig.* 2.

PISTILLUM; GERMINA numeroſa, in capitulum collecta; STYLI breves; STIGMATA obtuſa, *fig.* 3.

PISTILLUM: GERMINA numerous, growing in a little head; STYLES ſhort; STIGMATA blunt, *fig.* 3.

SEMINA plurima, ſubovata, compreſſa, villoſula, apice purpurea, ſtylum incurvum retinentia, haud infrequenter abortiva, *fig.* 4, 5.

SEEDS numerous, ſomewhat ovate, flattened, ſlightly villous, purple at top, retaining the ſtyle, which is bent downward, *fig.* 4, 5. frequently proving abortive.

The *Anemone apennina* found undoubtedly wild on the Apennine mountains, grows plentifully in Lord SPENCER's Park at Wimbledon, but in ſuch ſituations as leaves room to doubt its being an original native of that ſpot; we ſhould therefore have ſcarcely conſidered ourſelves juſtified in figuring it, as an Engliſh plant, had it not been mentioned by ſeveral authors as growing wild in different parts of the kingdom, as near *Harrow on the Hill*, Mr. DUBOIS; in a wood near *Luton-Hoe* in Bedfordſhire, Mr. TH. KNOWLTON; *Ray's Syn.* and near *Berkhampſtead*, Herts, Mr. GOODALL; *With. Arr. ed.* 2.

This ſpecies flowers the beginning of April at the ſame time as the Wood Anemone, with which it has ſome affinity in its foliage, but differs widely in its root and flowers, the former is much thicker, and more knobby, the Petals of the latter much narrower, more than twice as numerous, and of a colour wholly different, being of a light pleaſant purpliſh blue: when they firſt expand, the outer part of the Petals has a rich purpliſh tint, which is loſt when the flowers have been ſome time expoſed to the ſun.

It is a very ornamental plant, ſuitable to decorate the flower garden, ſhrubbery, or wilderneſs, it delights in a pure air, and a light loamy ſoil; we never could make it ſucceed in our Garden at Lambeth-Marſh, but at Brompton it thrives greatly.

Anemone apennina

_Primula acaulis.

PRIMULA ACAULIS. PRIMROSE.

PRIMULA. *Linn. Gen. Pl.* PENTANDRIA MONOGYNIA.
Involucr. Umbellulæ. *Corollæ* tubus cylindricus: ore patulo.
Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.
PRIMULA *acaulis* foliis rugosis, dentatis, subtus hirsutis; scapis unifloris. *Jacq. Misc. Austr. p.* 158.
PRIMULA *vulgaris* foliis dentatis rugosis scapo subunifloro, limbo corollæ plano. *Hudf. Fl. Angl. ed.* 2. *p.* 83.
PRIMULA foliis dentatis rugosis pedunculis radicalibus unifloris, limbo corollarum plano. *Kram. Elench. p.* 42.
PRIMULA *veris* var γ acaulis, scapo nullo. *Linn. Sp. Pl. p.* 204. *Syst. Vegetab. ed.* 14. *Murr. p.* 192. *Fl. Suec.* 171.
PRIMULA *sylvestris. Scopoli Fl. Carn. n.* 264.
PRIMULA foliis hirsutis, rugosis, dentatis; scapis unifloris. *Haller Hist. n.* 608.
VERBASCULUM sylvarum majus singulari flore. *Baub. Pin.* 241.
PRIMULA veris pallido flore humilis. *Clus. Hist. p.* 302.
PRIMULA veris minor. *Ger. Herb.* 636.
PRIMULA veris vulgaris. *Park. Th. p.* 535. *Raii Syn. p.* 284. Common Primrose.

RADIX perennis, obliqua, præmorsa, squamis crassis rubentibus a foliis præteritis relictis obtecta; emittens fibras copiosas, prælongas, teretes, albidas. Odor singularis fere anisi.

CAULIS nullus.

FOLIA subpalmaria, erectiuscula, oblongo-ovata, basi attenuata, obtusa, venosa, rugosa, supra lævia, subtus hirsuta, margine parum revoluta, leviter undulata, inæqualiter crenata; costa albida, in petiolum canaliculatum carinatum rubentem desinente.

STIPULÆ subunciales, acuminatæ, ad basin pedunculorum.

FLORES erecti, numerosi, pallide sulphurei, majusculi, suaveolentes.

PEDUNCULI erecti, foliis paulo breviores, uniflori, teretes, hirsuti, pallide virentes, ex ipsa radice progredientes, post florescentiam deflexi.

CALYX: PERIANTHIUM 1-phyllum, persistens, oblongum, tubulosum, plicato-pentagonum, pilosum, 5-dentatum, dentibus acuminatis, apice inflexis, *fig.* 1.

COROLLA monopetala, tubulosa; *tubus* cylindraceus, calyce longior, striatus, nitidus, *limbus* quinquepartitus, patens, laciniis obcordatis, emarginatis, basi macula stellæformi flava notatis; faux obsolete coronata, *fig.* 2.

STAMINA: FILAMENTA 5, brevissima, intra tubum corollæ, *fig.* 4. aut ad faucem ejus posita, *fig.* 3. ANTHERÆ erectæ, oblongæ, flavæ, subtrigonæ, *fig.* 5. conniventes.

PISTILLUM: GERMEN superum, subglobosum, glabrum, *fig.* 6. STYLUS filiformis, tubo plerumque brevior, *fig.* 7. STIGMA globosum, *fig.* 8.

ROOT perennial, oblique, stumped at the extremity, beset with thick reddish scales, the remains of the past leaves, sending down numerous, very long, round, whitish fibres; its smell singular, somewhat like that of anise.

STALK none.

LEAVES about a hand's breath in length, nearly upright, oblong-ovate, tapering to the base, blunt, veiny, wrinkled, smooth above, hirsute beneath, the edge slightly rolled back, slightly waved, unequally notched, the midrib whitish, terminating in a footstalk of a reddish colour, hollow on one side, and keeled on the other.

STIPULÆ about an inch in length, long-pointed, at the base of the flower-stalks.

FLOWERS upright, numerous, of a pale sulphur colour, rather large and sweet-scented.

FLOWER-STALKS upright, a little shorter than the leaves, one-flowered, round, hirsute, of a pale green colour, proceeding from the root itself, after the flowering is over, bending back.

CALYX: a PERIANTHIUM of one leaf, permanent, oblong, tubular, folded, and forming five angles, hairy, 5-toothed, teeth long-pointed, bending in at the tip, *fig.* 1.

COROLLA monopetalous, tubular; the *tube* cylindrical, longer than the calyx, striated, and glossy; *limb* quinquepartite, spreading, the segments obcordate, emarginate, marked at the base with a star-shaped yellow spot, the mouth marked with a faint rim, *fig.* 2.

STAMINA: five FILAMENTS, very short, placed either within the tube of the corolla, *fig.* 4. or at its mouth, *fig.* 3. ANTHERÆ upright, oblong, yellow, somewhat three-corner'd, *fig.* 5. closing together.

PISTILLUM: GERMEN above the base of the calyx, nearly globular, smooth, *fig.* 6. STYLE filiform, usually shorter than the tube, *fig.* 7. STIGMA round, *fig.* 8.

Primula veris appears to have been a kind of general, or generic name given by many of the ancient Botanists to the *Primrose*, *Cowslip*, and *Oxlip*; yet is most applicable to the Primrose, as a flower of the spring; they regarded these plants as so many distinct species, and such they were in general considered till LINNÆUS ventured to maintain a contrary opinion, an opinion which comparatively speaking, few of his followers have acquiesced in: partial as we are to the transcendent merits of that great man, we cannot agree with him in this instance, without destroying, as we apprehend, all limits of specific distinction.

The most striking character of the Primrose consists in its mode of flowering, each blossom growing on a single peduncle, which springs from the root; LINNÆUS asserts that the peduncles spring from a scapus, as in the Cowslip, though it be so short as not to appear above ground, and from this circumstance principally, he maintains that the Primrose is only a variety; or, in other words, that the Primrose, the Cowslip, and the Oxlip are one and the same species.

We will not deny the existence of such a stalk as LINNÆUS describes; in examining a vast number of these plants, we have found it in a few, but it certainly is not general in the wild plant; we are ready, however, to admit more than the existence of this short scapus; the plant when cultivated will sometimes throw up a stalk similar to that of the Polyanthus, and of this my very good friend Dr. BUXTON, of Greenwich, has favoured me with a striking instance; Primroses in their wild state introduced to his Garden at Maize-Hill, a few years since, now produce flowers, both with and without a scapus, are indeed become, colour excepted, perfect Polyanthuses; in my own garden the white hose in hose Primrose produces early in the spring, flowers on peduncles, and afterwards flowers on a scapus, or, to speak in the language of the florist, flowers in a truss, but still they have the foliage and the flowers of the true Primrose; the Cowslip and the Oxlip, on the contrary, sometimes produce flowers on peduncles, as well as on a scapus, of which I now have also instances in my garden; but

but what do all theſe prove? why that the *Primula*, like moſt other plants, is ſubject to the ſportings of nature. and which are no more to be regarded than the uncommon colours of a flower; the root or the ſtalk of a plant may be equally ſubject to vary as the bloſſom, and thoſe who cultivate plants ſee frequent inſtances of it: I once had a daiſy which became cauleſcent, that is, its peduncle became a ſtalk which threw out many peduncles bearing flowers, the terminal one of which was proliferous, but no one from ſuch an uncommon inſtance would infer that the *acaulis* character of the daiſy was invalidated; it is juſt ſo in my humble opinion with regard to the Primroſe, in general the peduncles ſpring ſingly from the root, and in forming its ſpecific character we muſt be guided by their uſual and genuine appearance.

Beſides the ſtriking character drawn from the infloreſcence, a very material difference is obſervable in other parts of the plant, betwixt it and the Cowſlip at leaſt; to ſay nothing of the leaves, which have been noticed by RAY in a contraſted point of view, *vid. Syn. ed.* 3. *p.* 283. how different is the corolla in ſize and ſhape, and how very different is the calyx?

In their natural place of growth, and time of flowering, we obſerve a very material difference betwixt theſe two plants; the Primroſe loves ſhelter, and the light umbrage of deciduous trees, through the leafleſs ſprays of which it may enjoy the vernal ſun, and when its flowering is over, be ſhaded from its too potent rays by the expanding foliage; hence we find it moſt commonly in woods, copſes, hedge-rows, at the foot of hedges, and in ſheltered lanes, where it is one of the firſt of our plants which awakens to the genial warmth of the ſun, and welcomes the returning year; if the ſeaſon be mild it will flower from March to May, its higheſt ſtate of bloom is with that of the *Wood Anemone;* it is alſo much diſpoſed to flower in the autumn, and even during winter if the weather be not ſevere: the Cowſlip very rarely manifeſts a diſpoſition of this ſort, contented once to ſhew its freckled bloom; inſtead of woods and their attendant ſhade, this muſt be ſought for in open paſtures, and meadows, where it courts that degree of ſun which would prove fatal to the Primroſe, it flowers in May with the *early ſpotted Orchis. (Orchis maſcula).*

The uſual colour of the Primroſe bloſſom is pale ſulphur, in ſome parts of the kingdom they are ſaid to be found wild of a purple hue; to enumerate all the varieties which have ſprung from accident, or culture, would afford little entertainment or inſtruction; ſuffice it to ſay that many of them are very ornamental, and highly deſerving of our care; the following are the moſt ſtriking varieties which I have yet had it in my power to cultivate, the SINGLE *white flowered*, the *paper white*, which Mr. MILLER ſays, without aſſigning any reaſon, is certainly a diſtinct ſpecies, the *red* or *purple* of various ſhades, the *hoſe in hoſe;* the DOUBLE *yellow*, the *deep velvet red*, the *pale red*, or *fleſh-coloured;* the *white* and the *dingy purple*, called by ſome the Scotch Primroſe; all theſe are charming ornaments for the ſhrubbery, the ſix laſt are plants of ſome value, and duplicates of them ſhould be kept in pots, which during ſummer muſt be placed in ſome ſhady ſituation; in the ſpring the ſhelter of a green-houſe will bring them forward, and make them flower to advantage, and as they bloſſom very early, they will tend to enliven a collection of more rare and valuable plants.

That curious variety called by GERARD and PARKINSON *Maſter* HESKETH'S *Primroſe*, we have not met with in the collections about London; we hope it may yet remain in ſome part of the kingdom, as it appears deſerving of culture from its great ſingularity; it is ſaid by PARKINSON to bear not only ſingle flowers upon ſeverall ſtalkes, but ſometimes two or three ſingle flowers upon one ſtalk, and alſo at the ſame time a bigger ſtalke, and ſomewhat higher, having one green huſke at the toppe thereof, ſometimes broken on the one ſide, and ſometimes whole, in the middle whereof ſtandeth ſometimes divers ſingle flowers thruſt together, vide its fig. in his *Parad. terr.* The following is GERARD'S account of it, "There is a ſtrange Primroſe founde "growing wilde, in Clapdale-Wood, near Settle, in Yorkſhire, by the travel, and induſtry of a learned "gentleman of Lancaſhire, called maſter THOMAS HESKETH, and a diligent ſearcher of Simples, who hath "not only brought to light this amiable and pleaſant kind of Primroſe, but many others likewiſe, never before "his time remembred, or founde out. This kinde of Primroſe hath leaves, and rootes like the wilde fielde "Primroſe, in eche reſpect, it bringeth forth among the leaves a naked ſtalke of a gréyiſh or overworne "greeniſh colour, at the top whereof doth growe in the winter time one flower, and no more, like unto that "ſingle one of the fielde; but in the ſummer time it bringeth foorth a ſoft ruſſet huſke or hoſe, wherein are "conteined many ſmal flowers, ſometimes fower or five and oftentimes more, very thicke thruſt together, "which maketh one entire flower, ſeeming to be one of the common double Primroſes, whereas indeed "it is one double flower made of a number of ſmal ſingle flowers, never ceaſing to beare flowers winter "nor ſummer as before is ſpecified."

While we are thus deſcribing the varieties to which this plant is ſubject, it may not be amiſs to obſerve that the ſtamina alſo vary greatly in their ſituation, being ſometimes found low down in the tube of the bloſſom, ſometimes at its mouth, in the former inſtance the Piſtillum which varies alſo in length ſhews its round ſtigma, and with its attendant ſtyle looks like a pin ſtuck in the centre of the flower; ſuch flowers in the Polyanthus are termed pin-eyed, while thoſe in which the antheræ cloſe the mouth of the tube, are called thrum-eyed, and this latter appearance in the opinion of the floriſt is an eſſential requiſite in a good flower.

The contemplative mind feels a complacency in ſurveying the improvements which Providence permits to take place, in that part of the animal and vegetable world which mankind have brought under their care and protection, many inſtances of theſe might be adduced from the more uſeful and neceſſary productions, but it is not thoſe only that amend under our care, we are permitted alſo to gratify our ſight with the endleſs varieties that flowers put on, when cultivated by the curious; nor in any one inſtance does

"*The exulting Floriſt mark*
"*with ſecret pride the wonders of his hand*"

more than in the boundleſs luxuriance that Polyanthuſes aſſume, their parent the Primroſe being a native, they face the ſeverity of the winds of March much more boldly than any foreign plants, natives of warmer climates.

LINNÆUS indeed cautions Botaniſts againſt being ſeduced by the gaudy tints, that faſcinate the mere floriſt, but ſurely we may ſafely admire, without fixing our attention wholly on the flower-bed.

The Primroſe comes in for a ſhare alſo of medicinal fame.

The leaves and the root of Primroſe ſeem to partake in ſome degree of the nature of thoſe of Aſarum, acting as ſtrong errhines, or ſternutatories, when ſnuffed up the noſe, and as emetics (the roots at leaſt) when taken inwardly; GERARD reports as from the experience of a ſkilful practitioner, that a drachm and a half of the powder of the dried roots taken up in autumn purgeth by vomit very forcibly, but ſafely, in ſuch manner as Aſarum doth. *Lewis M. M.*

The root affords a good example of the *radix dentata*, the tubercles forming the teeth, ariſe as in moſt roots of the kind from the remains of the baſe of the leaf, and hence from their number ſome idea may be formed of the age of the plant.

IBERIS NUDICAULIS. NAKED-STALKED CANDY-TUFT, or ROCK-CRESS.

IBERIS *Linn. Gen. Pl.* TETRADYNAMIA SILICULOSA.

Cor. irregularis, petalis 2 exterioribus majoribus. *Silicula* polyſperma, emarginata.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

IBERIS *nudicaulis* herbacea, foliis ſinuatis, caule nudo ſimplici. *Linn. Syſt. Vegetab. p.* 589. *Sp. Pl. p.* 907. *Fl. Suec. n.* 581. *Lightfoot Scot. p.* 346. *Hudſon Fl. Angl. ed.* 2. *p.* 285.

IBERIS foliis pinnatis, pinnis ovatis acutis. *Hall. Hiſt. n.* 521.

NASTURTIUM minimum vernum foliis tantum circa radicem. *Magnol. Bot. Monſp. p.* 187. cum fig.

BURSA PASTORIS minor foliis inciſis et *Thal. Baub. p.* 108.

NASTURTIUM petræum foliis Burſæ Paſtoris. *Baub. p.* 104.

BURSA PASTORIS minor. *Ger. emac.* 251. *Parkinſ.* 806. *Raii Syn. p.* 303. The leſſer Shepherd's Purſe, or Rock-Creſſe.

RADIX annua, fibroſa, albida.

CAULES vix palmares; juniores decumbentes, adultiores adſcendentes, demum erecti; plerumque aphylli, interdum tamen foliis aliquot veſtiti, ſimplices, teretes, glabri.

FOLIA radicalia petiolata, plerumque proſtrata, in orbem poſita, paulo ultra uncialia, lævia, ſinuato-pinnatifida, obtuſa; lobis in quibuſdam oppoſitis, in aliis alternis, terminali maximo, rotundato, caulina ubi adſunt ſeſſilia, inferiora quinquefida aut trifida, ſuperiora ſimplicia, lanceolata.

FLORES racemoſi, parvi, albi, inodori.

PEDUNCULI ſemunciales, patentiſſimi.

CALYX: PERIANTHIUM tetraphyllum; foliolis lato-lanceolatis, concavis, æqualibus, rufeſcentibus, deciduis, *fig.* 1.

COROLLA tetrapetala, inæqualis, calyce major; PETALA obovata, duo exteriora majora, patentia, duo interiora minora, inflexa, *fig.* 2.

STAMINA: FILAMENTA ſex, ſubulata, erecta, alba, quorum duo lateralia breviora; ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, compreſſum; STYLUS ſimplex, brevis; STIGMA obtuſum.

PERICARPIUM: SILICULA erecta, ſuborbiculata, emarginata, compreſſa, parum concava, margine acuto cincta, bilocularis, *fig.* 5. diſſepimento lanceolato; valvulis navicularibus, compreſſis, carinatis, *fig.* 6.

SEMINA in ſingulo loculo plerumque duo, ſubovata, *fig.* 7.

ROOT annual, fibrous, whitiſh.

STALKS ſcarcely a hand's breadth in height, the young ones decumbent, riſing as they grow older, finally upright, generally naked, but ſometimes furniſhed with one or more leaves, ſimple, round, and ſmooth.

LEAVES next the root, ſtanding on footſtalks, generally ſpread circularly on the ground, ſomewhat more than an inch in length, ſmooth, ſinuated and pinnatifid, obtuſe, the lobes in ſome oppoſite, in others alternate, the terminal one very large and rounded, thoſe of the ſtalk (if any) ſeſſile, the lowermoſt ones divided into five or three ſegments, the upper ones ſimple and lanceolate.

FLOWERS growing in racemi, ſmall, white, and without ſcent.

FLOWER-STALKS half an inch long, ſpreading wide.

CALYX: a PERIANTHIUM of four leaves, broad lanceolate, concave, equal, reddiſh, and deciduous, *fig.* 1.

COROLLA compoſed of four petals, unequal, larger than the calyx; PETALS obovate, the two outer ones largeſt, ſpreading, the two inner ones leaſt, bent in, *fig.* 2.

STAMINA: ſix FILAMENTS, tapering, upright, white, the two ſide ones ſhorteſt; ANTHERÆ roundiſh, yellow, *fig.* 3.

PISTILLUM: GERMEN roundiſh, flattened; STYLE ſimple, ſhort; STIGMA obtuſe.

SEED-VESSEL: an upright POD, ſomewhat orbicular, emarginate, flattened, a little concave, ſurrounded with a ſharp margin, compoſed of two cavities, *fig.* 5. the partition lanceolate, the valves boat-ſhaped, flattened, keeled, *fig.* 6.

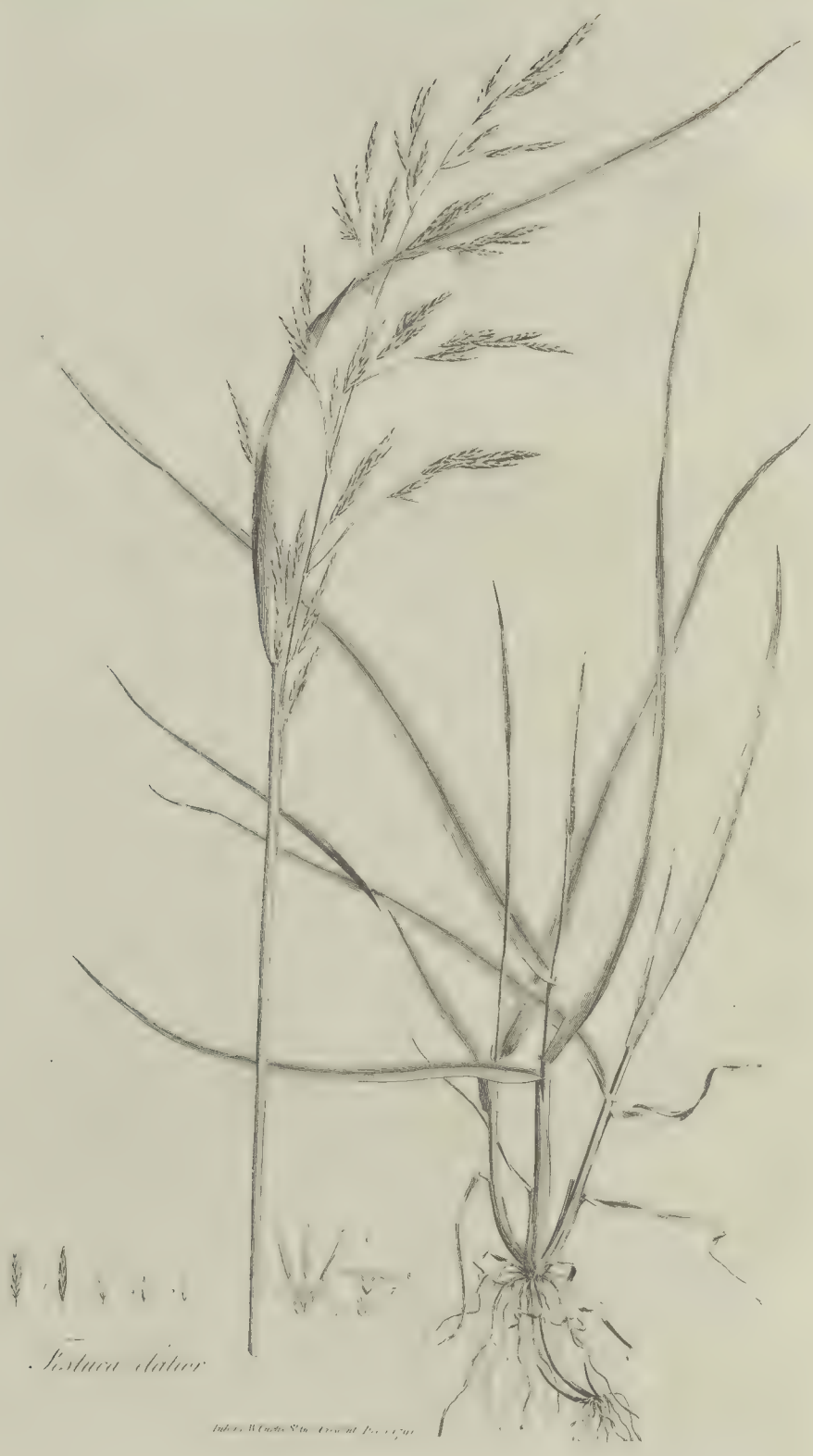
SEEDS: generally two in each cavity, ſubovate, *fig.* 7.

This diminutive plant occurs ſparingly in the neigbourhood of London, and principally to the weſtward of it: we have found it on Hounſlow-Heath, Putney, and Barnes-Common, more frequently indeed on the laſt, and generally on the edges of gravel-pits, where the ſoil has been dry and barren, and where uſually grew *Gnaphalium montanum*, *Aira flexuoſa*, and *Ornithopus perpuſillus*.

Its flowers, which come forth in May and June, are very minute, but when magnified ſufficiently diſtinguiſh the leading trait in its generic character; they are ſucceeded in July by ſeed-veſſels rather large in proportion to the plant.

The ſtalk is not always deſtitute of leaves; the more luxuriant the plant, the more it is diſpoſed to produce them: MAGNOL obſerves, that they are ſometimes found entire on the edges.

Mertensia
undulata



Festuca elatior

Johnson & Curtis, 8 Ave Crescent Pl. E.C.

FESTUCA ELATIOR. TALL FESCUE GRASS.

FESTUCA *Linn. Gen. Pl.* TRIANDRIA DIGYNIA.
Cal. 2 valvis. *Spicula* oblonga, teretiuſcula, glumis acuminatis.
Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.
FESTUCA *elatior* panicula decompoſita, primo nutante, florente ſuberecta, ſpiculis ovato-lanceolatis acutis muticis, foliis planis.
FESTUCA *elatior* panicula ſecunda erecta, ſpiculis ſubariſtatis, exterioribus teretibus. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 118. *Sp. Pl. p.* 111. *var. β. Schreb. Gram. t.* 2. *p.* 34.
POA foliis latis aſperis, locuſtis teretibus muticis, glumarum oris membranaceis. *Hall. Hiſt. n.* 1451.
FESTUCA *elatior* panicula ſecunda erecta ramoſa, ramis binatis, ſpiculis ovatis ſubariſtatis, foliis planis. *Hudſ. Fl. Angl. ed.* 2. *p.* 47.
GRAMEN arundinaceum aquaticum panicula avenacea. *Raii Syn. ed.* 3. *p.* 411. 14.
GRAMEN paniculatum nemoroſum latiore folio glabrum, panicula nutante, non ariſtata. *Raii Syn. p.* 411. 15.
GRAMEN arundinaceum locuſtis viridi ſpadiceis loliaceis, brevius ariſtatis. *Scheuch. Agroſt. p.* 266.
GRAMEN loliaceum ſpica diviſa pratenſe majus. *Moriſ. Hiſt. Ox.* III. 184. *t.* 2. *f.* 15.

RADIX perennis, fibris numeroſis, fuſcis, ramoſiſſimis, ſubvilloſis.
CULMI bi-tripedales et ultra in pingui ſolo, erecti, teretes, glabri, nodoſi, ad baſin plerumque purpurei.
FOLIA inferiora pedalia, aut ſeſquipedalia, tres quaterve lineas, lata, ſenſim acuminata, ſuperne et ad margines ſcabriuſcula, ſtriata, inferne carinata, nitidula, amplexicaulia, baſi ipſa e flavo vireſcente; *membrana* breviſſima truncata, caulina breviora; *Vaginæ* ſtriatæ, læves.

PANICULA ſpithamæa, aut pedalis, primo plerumque nutans, poſtea ſuberecta; *Rami* plerumque binati, inæquales, in ramulos plerumque ſubdiviſi, ad baſin tumidi; *Rachis* anguloſus, flexuoſus, ſcabriuſculus, nitidus.

SPICULÆ ovato-lanceolatæ, teretiuſculæ, viridi et purpureo variegatæ, ſuboctofloræ, nunc muticæ, *fig.* 2. nunc brevius ariſtatæ, *fig.* 1.

CALYX: *Gluma* bivalvis; valvis inæqualibus, acuminatis, *fig.* 3.
COROLLA bivalvis, valvis ſubæqualibus acutis, exteriore majore, et paulo longiore, *fig.* 4. interiore ſæpe bifida, *fig.* 5.

STAMINA: FILAMENTA tria, capillaria; ANTHERÆ lineares, flavæ, auct. *fig.* 6.
PISTILLUM: GERMEN obovatum, læve; STYLI duo, patentes, plumoſi, *fig.* 7, 8.
NECTARIUM: *Glumulæ* duæ, ad baſin germinis, ovato-acuminatæ, denticulo laterali acuminato plerumque inſtructæ, *fig.* 9.

ROOT perennial, furniſhed with numerous brown fibres, much branched, and ſlightly villous.
STALKS from two to three feet high, or more in a rich ſoil, upright, round, ſmooth, jointed, uſually purple at the baſe.
LEAVES towards the root, a foot or a foot and a half long, and three or four lines broad, gradually tapering to a point, above and on the edges roughiſh, ſtriated, on the under ſide keeled, a little gloſſy, embracing the ſtalk, the very baſe of a yellowiſh green colour; *membrane* very ſhort and truncated, leaves of the ſtalk ſhorter; *Sheaths* ſtriated and ſmooth.
PANICLE from a ſpan to a foot in length, at firſt for the moſt part drooping, becoming afterwards nearly upright; *Branches* generally growing in pairs, unequal, for the moſt part ſubdivided into ſmaller ones, tumid at the baſe; *Rachis* angular, crooked, roughiſh, gloſſy.
SPICULÆ ovato-lanceolate, roundiſh, variegated with green and purple, containing about eight flowers, ſometimes without, *fig.* 2. ſometimes having ſhort awns, *fig.* 1.
CALYX: a *Glume* of two valves, which are unequal and taper to a point, *fig.* 3.
COROLLA compoſed of two valves, the valves nearly equal, pointed, the outermoſt larger and a little longer than the other, *fig.* 4. the inner one often bifid, *fig.* 5.
STAMINA: three capillary FILAMENTS; ANTHERÆ linear and yellow, magnified, *fig.* 6.
PISTILLUM: GERMEN inverſely ovate, ſmooth; STYLES two, ſpreading, feathery, *fig.* 7, 8.
NECTARY two ſmall *Glumes* at the baſe of the germen, ovate with a long point, uſually furniſhed on the ſide with a long ſlender tooth, *fig.* 9.

The three Graſſes figured in the preſent number, differ ſo materially in their uſual appearance when growing wild, that from the firſt we have been induced to conſider them as diſtinct ſpecies; that we might however profit by the light which cultivation in numerous inſtances throws on ſpecies and varieties, we brought them into our garden, and after cultivating them many years in different ſoils and ſituations, find ourſelves juſtified in the idea originally entertained.

The firſt of theſe, the *Feſtuca elatior*, is the leaſt common of the three, and with us the moſt local, affecting and found chiefly in wet ſituations, as on the edges of the rivulets proceeding from the Thames, in the oſier grounds adjoining it, and more rarely in moiſt meadows and woods: we have obſerved it this year 1791, in great plenty in an oſier-ground adjoining the Thames, nearly oppoſite the phyſic-garden, Chelſea; RAY mentions it as having been found by Mr. DOODY, between London and Chelſea: it grows in large tufts, and is rendered conſpicuous by the breadth of its leaves, the height of its ſtems, and the drooping of its panicle, at leaſt before it flowers.

The ſtudent muſt be careful not to miſtake it for the *Bromus hirſutus* and *giganteus* already figured in this work, and which have ſome affinity to it at leaſt in point of ſize.

In open meadows, being in every reſpect ſmaller, it is not ſo diſtinguiſhable.

It flowers about the latter end of June and beginning of July.

We find it to be a hardy, perennial, and very productive graſs, and that it will grow on moderately dry ſoils better than might be expected; we apprehend however that it is too harſh and coarſe, either for hay or paſture: we recommend it nevertheleſs to the notice of the Agriculturiſt; it probably may prove a good graſs for ſoils which cannot be drained of their too great moiſture, or which are apt to be overflown.

In very luxuriant ſpots the leaves will ſometimes be found half an inch wide, as VAILLANT deſcribes it; in general, ſize excepted, we diſcover very little variation in the habit or characters of this graſs: in regard to *Ariſta*, indeed, it varies as moſt other graſſes are obſerved to do.

We have found it for the moſt part beardleſs, ſome authors deſcribe it with, others without an Ariſta, *vid. Synon.* Captain DORSET, who has beſtowed great attention on the Britiſh Graſſes, ſent me a ſpecimen this year, gathered near Woolwich, the flowers of which were all ſhortly bearded.

Unfortunately for the ſcience,
On the awn there's no reliance.

We have frequently noticed it in thoſe graſſes, which, according to their character, ſhould not have it, and wanting where it ought to have been; this ſummer in particular, I obſerved a plant of the *Avena elatior* without awns, the ſingularity of which prompted me to remove its root to my garden.

Our figure repreſents the *Feſtuca elatior* juſt coming into bloom.

FESTUCA PRATENSIS. MEADOW FESCUE-GRASS.

FESTUCA. *Linn. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Spicula* oblonga, teretiuſcula, glumis acuminatis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

FESTUCA *pratenſis* panicula ſecunda obliqua, ſpiculis muticis ſublinearibus, foliis planis.

FESTUCA *elatior Linn. Fl. Suec. n.* 94.

FESTUCA *pratenſis* panicula erecta, ſpiculis linearibus muticis, foliis planis. *Hudſon Fl. Angl. ed.* 1. *p.* 37.

GRAMEN paniculatum elatius, ſpicis longis, muticis, ſquamoſis. *Raii Syn. p.* 411. 16. *Scheuch. Agroſt. p.* 202. 2.

PHŒNIX multiplici ſpicata panicula. Branched Darnel-Graſſe. *Park. Theat. p.* 1145.

GRAMEN loliaceum panicula multiplici et ſpicata. *Tourn. Inſt. p.* 516. *Scheuch. Agroſt. p.* 200. 1.

In the environs of London the *Feſtuca pratenſis* is a very common graſs, growing ſpontaneouſly in ſituations widely varied; we have obſerved it in the ſand-pits at Charlton, and the oſier grounds near Batterſea; alſo in various paſtures, and by the ſides of paths; but it abounds moſt in fertile meadows which are moderately moiſt: in many parts of Batterſea meadows it may be found moſt plentifully.

It flowers about the middle of June; ſeed from a crop of it ſown on ground which I occupy at Brompton, was ripe and cut by the end of the ſame month.

From long cultivation we have obſerved this graſs continue perfectly diſtinct, and as we have found it to be a very hardy perennial, producing a great crop of deſirable herbage, we have recommended it * as one of the beſt of our Britiſh graſſes.

Except in ſize, ariſing from luxuriance of ſoil, it is not ſubject to much variation.

Several authors have confounded this ſpecies with the *elatior*, to which it certainly bears great affinity: MORISON and RAY, two of our early writers have the credit of conſidering them as diſtinct. RAY, in his *Hiſt. Pl.* has happily diſplayed the character of the *pratenſis*, and MORISON has well deſcribed and figured the *elatior*; it appears clearly alſo from the following words, which we find at the cloſe of the latter's deſcription of the *elatior*, that he regarded the *pratenſis* as a diſtinct ſpecies, "alterum in pratis dimidio minus ejuſdem formæ frequens invenitur, et tanquam diſtinctæ ſpeciei habendum."—SCHEUCHZER gives a minute deſcription of the *pratenſis*, making two varieties of it without any very apparent reaſon: it is remarkable that LINNÆUS does not refer to this author either for his *elatior* or his variety of it. VAILLANT, as is evident from his references to RAY's two plants, conſiders the *elatior* and *pratenſis* as the ſame, though LINNÆUS in his *Fl. Suec.* and *Spec. Plant.* confounds two plants in his references, and quotes indeed a figure in BARRELIER, which is neither *elatior* nor *pratenſis*, but the *Feſtuca pinnata Hudſ. ed.* 2. yet we ſuſpect † from what he ſays of its place of growth, &c. for his ſpecific deſcription is a very inadequate one, that our *pratenſis* is his *elatior*; his *var.* β of the *elatior* in the *Sp. Pl. ed.* 3. is clearly our *elatior*, but in the *Syſt. Vegetab. ed.* 14. his laſt work, the *elatior* from a new reference to SCHEUCHZER is evidently made our *elatior*, and the variety is wholly loſt ſight of. Mr. HUDSON, in the firſt edition of his *Fl. Angl.* gave to this graſs the name of *pratenſis*, which, as the plant is chiefly found in meadows, is an extremely proper one, and as ſuch we moſt readily adopt it: in the 2d edition of the ſame work, by ſome unaccountable miſtake, for ſuch it muſt be, he has been induced contrary to the opinion of all Botaniſts to conſider it, together with the *loliacea* as varieties of the *Feſtuca fluitans*, aſſerting that they change to it when cultivated ‡. We muſt obſerve that this is not only contrary to our experience in regard to culture, but that we have frequently, and this ſeaſon particularly, obſerved the *pratenſis* growing in ſeveral wet ſpots in Batterſea meadows, cloſe to the *fluitans*, and that both the graſſes aſſumed their uſual appearance; not to mention the different habits of theſe plants, the different form of their ſpiculæ, &c. the *fluitans* has a nectary differing widely from that of the *pratenſis*, *elatior*, or *loliacea*, and which alone would remove any doubts, could ſuch be really entertained on this ſubject.

The *pratenſis* differs from the *elatior* in its uſual place of growth; we have indeed found them growing cloſe together: but betwixt Batterſea and Vauxhall, where theſe plants grow abundantly, the *elatior* uſually grows ſeparately from the *pratenſis*; and as we have before obſerved in the oſier grounds, where it has the advantage of moiſture and ſome ſhade; the *pratenſis* grows more diſperſed in the open meadows, not forming ſuch large tufts as the *elatior*, the *elatior* taking plants of equal ſtrength and age, and which is to be underſtood through the whole of the ſubſequent compariſon, is uſually, nearly twice as high, and has foliage twice as broad, as that of the *pratenſis*; the panicle in the *elatior* is not only much longer, but contains a far greater number of flowers, in the proportion of 64 to 128 taken from medium ſpecimens; the panicle in the *pratenſis* is uſually once branched, in the other twice; in the *elatior* it droops greatly at firſt; in the *pratenſis* but ſlightly; in the latter it leans to one ſide when in flower, and the flowers grow one way; in the *elatior* they grow more looſely, ſpreading more on all ſides, but the ſpiculæ afford one of the moſt obvious diſtinctions; in the *pratenſis* theſe are ſomewhat flat, linear, and obtuſe; in the *elatior* more round, ovate, and pointed.

Theſe two plants differ alſo about a fortnight or three weeks in their time of flowering.

Fig. 1. *Spicula.*
2. *Glumæ Calycinæ.*
3, 4. *Glumæ Corollaceæ.*
5. *Nectarium.*
6. *Stamina.*
7. *Piſtillum.*
8. *Semen glumis incluſum.*
9. *Semen denudatum.*

Fig. 1. *One of the Spiculæ.*
2. *Glumes of the Calyx.*
3. 4. ——— *Corolla.*
5. *The Nectarire.*
6. *The Stamina.*
7. *The Piſtillum.*
8. *The Seed encloſed within the Glumes.*
9. *The Seed taken out.*

* Vid. Practical obſervations on the Britiſh graſſes beſt adapted for laying down or improving of meadows and paſtures.

† Since the above was written we have had the ſatisfaction to learn from Mr. AFZELIUS, a Swediſh Botaniſt of the firſt éminence now in London, who had the honour of being a pupil to LINNÆUS, and who meditates a new edition of the Fl. Suec. of that illuſtrious author, that the pratenſis here figured is indiſputably the elatior of the Fl. Suec. a name LINNÆUS had been induced to give it from its being the talleſt feſtuca, he had then ſeen growing, for it appears that he was at that time a ſtranger to our Feſtuca elatior.

‡ α (Feſtuc. fluitans) fata in hortis mutatur in β (loliacea) et γ. (pratenſis) primo anno in β fecundo in γ. Hudſ. Fl. Angl. ed. 2. p. 17

Festuca pratensis

Festuca loliacea

Pub. by W. Curtis, S. Ex. Segment, Dec. 1790.

FESTUCA LOLIACEA. DARNEL FESCUE-GRASS.

FESTUCA. *Linn. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Spicula* oblonga, teretiuſcula, glumis acuminatis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

FESTUCA *loliacea* ſpicata, ſpiculis alternis ſeſſilibus, compreſſis muticis. *Huds. Fl. Angl. ed.* 1. *p.* 38.

POA locuſtis diſtichis, ſpicatis, muticis. *Hall. Hiſt. n.* 1452.

PHŒNIX longius ſpicata. *Park. Theat. p.* 1146. *fig. to the left?*

From the various appearances which this plant aſſumes, it may be ſtyled the very Proteus of Graſſes; in its moſt uſual form it bears a reſemblance to the *Lolium perenne*, and hence it has been conſidered by ſome as a variety of that plant, and as ſuch it is figured by MORISON; when branched, which it frequently is, it approaches near to, and has been taken for the *Feſtuca pratenſis*, but it indiſputably is a diſtinct plant from both.

With us it grows ſpontaneouſly, and plentifully in moiſt fertile meadows.

In root, ſtalk, leaves, and habit, it comes ſo near to the *Lolium perenne* as ſcarcely to be diſtinguiſhed from it, but uſually exceeds it in height by about one third; the flowers in general grow in a ſimple ſpike, from eight inches to a foot in length, bending a little towards the top; the ſpiculæ are ſeſſile, nearly an inch long, diverging from and for the moſt part placed obliquely to the rachis, ſometimes ſtanding on foot-ſtalks of different lengths, the lowermoſt ones about an inch long, nearly round, flattened a little on the ſides, running out to a point; the uppermoſt ones ſhorter and ſomewhat broader, containing from ten to fifteen flowers; the calyx uſually conſiſts of two valves unequal in ſize, the innermoſt frequently ſmall, lateral, and ſometimes wanting; the other parts of the fructification are very ſimilar to thoſe of the pratenſis and elatior.

The flowers, as we before obſerved, uſually grow in a ſimple ſpike: this ſpike not unfrequently occurs branched; then its appearance is greatly altered, and it approaches nearer to the feſtuca pratenſis; but in that ſtate it is diſtinguiſhed from it by the length of its ſpiked panicle; moſt commonly the branches grow from the baſe of the ſpike, ſometimes from the middle; in Batterſea meadows, where this graſs is found abundantly, I have obſerved a variety, in which the ſpiculæ were ſhorter than uſual, and two or three of them grew together from the ſame point; but the grand difficulty which the ſtudent has to encounter in relation to this graſs is, when he meets with that variety of it, which having ſhorter and broader ſpiculæ than uſual, reſembles Lolium perenne ſo much, as to make him ready to exclaim, "they are the ſame:" in this dilemma there are three characters, ſome one of which I have never yet known to fail: firſt, the ſituation of the ſpiculæ with reſpect to the rachis; the edge of theſe in the Lolium is always parallel with the rachis, which gives the ſpike a flat appearance; in the loliacea they are placed more or leſs obliquely: ſecondly, in the Lolium perenne there is never more than one valve to the calyx, which is a ſtrong one, uſually two thirds as long as the ſpicula; in the Feſt. lol. there is for the moſt part two, though it often happens that the inner one is very ſmall, imperfect, and ſometimes wanting altogether: but it happens very rarely indeed that the inner valve is wanting in all the ſpiculæ of a ſpike from the ſame root; ſhould this character fail, our dependance muſt be, thirdly, on the length of the outer valve of the calyx, which rarely is more than one third as long as the ſpicula.

We have dwelt thus minutely, tediouſly we fear ſome may think, on theſe circumſtances, from a wiſh to remove all doubts reſpecting this plant, and ſave ſuch as may honour the Flora Lond. with their peruſal, from experiencing the difficulties and perplexities in which it has frequently involved us.

The Feſtuca loliacea comes into bloom about the ſame time as the pratenſis, it is therefore not ſo early as ſome other graſſes; we have found it from many years culture a hardy perennial of very quick growth, producing a larger but ſomewhat ſimilar crop to ray graſs, ſucceeding beſt in a moiſt ſoil; it is however rather harſh and ſtalky; thoſe qualities excepted it would appear to be equal in goodneſs to ſome of the beſt of our paſture graſſes, and as ſuch we recommend it to the notice of the Agriculturiſt: there is one circumſtance attends this graſs which we muſt not omit to make known, as it highly concerns its culture, and affords a ſomewhat unuſual inſtance of vegetable œconomy: the cultivated plant has produced me no perfect ſeeds, either at Lambeth-Marſh or Brompton; the ſame nearly may be ſaid of the elatior, while the pratenſis has conſtantly produced good ſeeds in abundance.

In the firſt edition of Mr. HUDSON's Fl. Angl. we find this Feſtuca under the name of loliacea, a name highly proper, whether we conſider it as referring to the Lolium perenne, which it ſo much reſembles, or to the affinity it bears to the genus Lolium; for it certainly is the connecting link of the Feſtuca and Lolium; we have to regret, however, that the ingenious author ſhould derogate from the merit of making it a ſpecies, by conſidering it in the ſecond edition of the ſame work as a variety of the Feſtuca fluitans.

Partes Fructificationis.

Fig. 1. *Spicula.*
2. *Glumæ calycinæ.*
3, 4. —— *Corollaceæ.*
5. *Nectaria.*
6. *Stamina.*
7. *Piſtillum.*

Parts of Fructification.

Fig. 1. *One of the Spiculæ.*
2. *Glumes of the Calyx.*
3, 4. ——— *Corolla.*
5. *The Nectaries.*
6. *The Stamina.*
7. *The Piſtillum.*

LEONTODON HIRTUM. · DEFICIENT DANDELION.

LEONTODON *Linn. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS. *Recept.* nudum. *Calyx* imbricatus, ſquamis laxiuſculis. *Pappus* plumoſus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

LEONTODON *hirtum* calyce toto erecto, foliis dentatis hirtis: ſetis ſimpliciſſimis. *Linn. Syſt. Veg. ed.* 14. *Murr. p.* 715. *Sp. Pl. ed.* 3. *p.* 1123. *Leers Fl. Herborn. ed.* 2. *p.* 172.

HEDYPNOIS *hiſpidum* var β hirtum. *Hudſon Fl. Angl. ed.* 2. *p.* 340.

RHAGADIOLUS foliis ſemipinnatis aſperrimis. *Haller Hiſt. n.* 7.

HIERACIUM pumilum ſaxatile aſperum præmorſa radice. *Bauh. Pin.* 128. *Raii Syn. ed.* 3. *p.* 167. Dwarf Rough Stone Hawkweed with bitten Roots.

HIERACIUM pumilum Alpinum præmorſa radice. Dwarfe Mountaine Hawkweed. *Park. Th. p.* 789. 5.

Among the plants of the Claſs *Syngeneſia*, there are ſome few whoſe ſeeds are not furniſhed with any pappus, or down, as the *Lapſana communis*, and *Rhagadiolus* of LINNÆUS; in the preſent plant the ſeeds in the outer row are deſtitute of pappus, or crowned only with a few very ſhort briſtles, while all the others are furniſhed in the uſual manner. HALLER, the firſt author, perhaps, who noticed this appearance, conſiders it of ſufficient conſequence to found a genus on; he therefore makes it a *Rhagadiolus*, a genus alſo of TOURNEFORT's, united by LINNÆUS with the *Lapſana*.

LEERS has very minutely noticed the characters in which this plant differs from the *hiſpidum* of LINNÆUS, whoſe ſpecific deſcriptions of the two plants are not ſufficiently diſcriminating; the ſetæ, as LEERS has obſerved, and we have found by experience, varying greatly in both ſpecies, for *ſetis ſimplicibus*, we would therefore ſubſtitute *coloribus glabriuſculis. ſeminibus exterioribus pappo deſtitutis*, either of which characters will diſtinguiſh them; the old Botaniſts diſtinction of radice præmorſa is not to be depended on in all caſes, as it varies with the age of the plant.

When we figured in the 53d number of the *Flora Lond.* the *Leontodon hiſpidum*, we had no idea that the preſent plant was a diſtinct ſpecies, preſuming too much on the character drawn from the nodding of the peduncle, which we had found highly uſeful in aſcertaining that ſpecies; we conſidered it as a variety merely, ariſing from ſituation, and ſuch ſhould probably ever have regarded it, had not the ſingular circumſtances attending the outer row of ſeeds been mentioned to us by a Botaniſt of ſuperior diſcernment, Dr. BENJAMIN DAWSON, Miniſter of *Burgh*, in *Suffolk*; on examination we found the ſeeds exactly as he had repreſented them, and on comparing the two plants, found them to differ in a variety of particulars, the moſt ſtriking of which we ſhall here enumerate.

The whole plant is much ſmaller, the leaves ſpread more on the ground, and are of a darker colour, the flower-ſtalks are more numerous, leſs upright, not only turning down or nodding at top, but frequently irregularly curled, eſpecially in the young ones, beſet with long crooked hairs, particularly towards the bottom, never furniſhed with ſmall ſquamæ or leaves, the flower-buds, and flowers themſelves much ſmaller in proportion to thoſe of the *hiſpidum*, more reſembling thoſe of the *Leontodon autumnale*, the uppermoſt leaves of the calyx ſmooth, and at the point and edges of a deep purple or blackiſh colour; and that as far as we have obſerved invariably, many other characters might be pointed out; but theſe it is preſumed, aſſiſted by the figure, will be ſufficient to make the plant known; in doubtful caſes recourſe may be had to the ſeed, and it will not be neceſſary to wait till that be ripe; the character appertaining to it will be viſible on a nice examination, even when the plant is in flower: we may add, that the two plants cultivated in the ſame ſoil and ſituation, continue widely different.

Preſuming that an Engliſh name for this ſpecies, drawn from a circumſtance leading ſo immediately to a knowledge of the plant, would be ſuperior to a literal tranſlation of the name of *hirſutum*, and which is ſo very ſimilar to that of *hiſpidum*, we have been induced to give it that of *deficient*.

The *Leontodon hirtum* is frequent on moſt of the heaths and commons about town, particularly Hampſtead-Heath, and Barnes-Common, where it flowers from June to Auguſt.

We rarely meet with the hirtum and hiſpidum on the ſame ſpot.

Fig. 1. Corollula.

2. Series exterior ſemin. pappo deſt.

3. Semen hujuſmodi ſeorſim poſit.

4. Semen ex interior part. fl. pappo inſtruct.

Fig. 1. A ſingle floret.

2. The outer row of ſeeds without any pappus.

3. One of the ſame kind placed ſingly.

4. A ſeed from the interior part of the flower furniſhed with pappus.

Leontodon taraxacum

Ranunculus Flammula

RANUNCULUS FLAMMULA. SMALL SPEAR-WORT.

RANUNCULUS *Linn. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* 5, intra ungues, poro mellifero. *Sem.* nuda.

Raii. Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *Flammula* foliis ovato-lanceolatis petiolatis caule declinato. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 515. *Sp. Pl. ed.* 3. *p.* 772. *Fl. Suec. n.* 494. *Scop. Fl. Carn. ed.* 2. *n.* 682. *Hudſ. Angl. ed.* 2. *p.* 240. Procumbent Crow-Foot or Spear-Wort. *Lightfoot Scot. V.* 1. *p.* 288. An lus-mòr, Ghlais-leun *Gaulis.*

RANUNCULUS foliis ovato-oblongis integerrimis, caule procumbente. *Fl. Lapp.* 325.

RANUNCULUS caule declinato foliis elliptico-lanceolatis ſubſerratis. *Hall. Hiſt.* 1182.

RANUNCULUS longifolius paluſtris minor. *Bauh. Pin.* 180.

RANUNCULUS flammeus minor. *Ger.* 814. *fig.* 2. the leſſer Spear-Wort; alſo, Ranunculus flammeus ſerrat, *fig.* 3. *emac. p.* 961. *fig.* 2, 3. *Raii Syn. ed.* 3. *p.* 250. the leſſer Spear-Wort.

RANUNCULUS paluſtris flammeus minor five anguſtifolius. *Park. Theat. p.* 1214.

RADIX perennis, fibroſa, fibris ſimplicibus, majuſculis.

ROOT perennial, fibrous, fibres ſimple, and rather large.

CAULES pedales et ultra, ſubereƈti, flexuoſi, parum compreſſi, ſubangulosi, pubeſcentes, purpureo-virides, ramoſi, *Rami* breves, alterni, divaricati.

STALKS a foot high or more, ſomewhat upright, crooked, a little flattened, ſlightly angular, downy, of a purpliſh green colour, branched; *Branches* ſhort, alternate, divaricating.

FOLIA radicalia ovato-lanceolata, utrinque acuta, longe petiolata, petiolo canaliculari compreſſo; caulina remota, oblongo-lanceolata, brevius petiolata, petiolis baſi dilatatis, vaginantibus; ſuprema et floralia linearia; omnia lævia, nunc integerrima, nunc plus minus dentata, dentibus obtuſis, inæqualibus, callofis, ſubfuſcis.

LEAVES next the root ovato-lanceolate, pointed at each end, ſtanding on long foot-ſtalks, the foot-ſtalk hollow on one ſide, and flattened, thoſe of the ſtalk oblong-lanceolate, ſtanding on ſhorter foot-ſtalks, which are dilated, and ſheathing at the baſe; the uppermoſt, and thoſe next the flowers, linear; all of them ſmooth, ſometimes perfeƈtly entire, ſometimes more or leſs toothed, teeth obtuſe, unequal, callous, and of a browniſh colour.

FLORES in caulium ramorumque ſummitate, flavi.

FLOWERS on the top of the ſtalk and branches yellow.

CALYX: PERIANTHIUM 5-phyllum, foliolis ovatis, obtuſis, villoſiuſculis, concavis, luteſcentibus, deciduis, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, which are ovate, obtuſe, ſlightly villous, concave, yellowiſh and deciduous, *fig.* 1.

COROLLA: PETALA 5, calyce triplo longiora, rotundato-ſubobcordata, patentia, parum concava, flava, ſuperne ſplendentia, ungue breviſſimo, *fig.* 2.

COROLLA: five PETALS, thrice as long as the calyx, roundiſh, and ſomewhat inverſely heart-ſhaped, ſpreading, ſlightly concave, yellow, on the upper ſide gloſſy, claw very ſhort, *fig.* 2.

NECTARIUM: foveola in ungue cujuſvis petali.

NECTARY: a little cavity in the claw of each petal.

STAMINA: FILAMENTA plurima, ad 30, Corolla multo breviora; ANTHERÆ ereƈtæ, oblongæ, didymæ, flavæ.

STAMINA: FILAMENTS numerous, to thirty, much ſhorter than the Corolla; ANTHERÆ upright, oblong, double, and yellow.

PISTILLUM: GERMINA numeroſa in capitulum colleƈta; STYLI nulli; STIGMATA reflexa, *fig.* 3.

PISTILLUM: GERMINA numerous, forming a little head; STYLES none; STIGMATA bent back, *fig.* 3.

The *Ranunculus Flammula* grows plentifully with us in marſhy places, and eſpecially in the wet, and more boggy parts of heaths and commons, where it flowers from June to September.

The latter part of LINNÆUS's deſcription of this plant, does not accord with the appearance it uſually aſſumes with us, *caule adſcendente*, which is the reverſe of *declinato*, is indeed more applicable to it, not but the plant frequently grows nearly upright, as the old authors have repreſented it, though not ſo perfeƈtly upright as the *Lingua*. Mr. HUDSON's engliſh name of procumbent, as it implies a greater approximation to the earth, is ſtill more objeƈtionable; nor can much be ſaid in favour of BAUHIN's name of *longifolius*, which ſome have adopted, as it gives an idea of a longer leaf than the plant has. The old Botaniſts called theſe two ſpecies of Ranunculus *Spear-Worts*, from the ſhape of their leaves, the great and leſſer. Mr. RAY and Mr. LIGHTFOOT adopted thoſe names, and we ſee no good reaſon why they ſhould be diſcontinued.

The

The ſmall Spear-Wort is one of thoſe plants which is ſubject to great variation; DODONÆUS has obſerved, that in Holland, where it grows luxuriantly, it acquires the height of two cubits; in the cold barren ſoils of mountainous countries it is altogether as diminutive; in proportion to its ſtrength, appears to be the uprightneſs of its growth; on the ſtony margins of lakes, HALLER obſerved it to be ſmall and creeping, with linear leaves: as it receded from ſuch ſituations, it became taller, and finally aſſumed its uſual appearance: in this ſmall and creeping ſtate authors have conſidered it as a ſpecies; as ſuch LINNÆUS has adopted it under the name of *reptans*, and Mr. LIGHTFOOT figured it on the frontiſpiece to the ſecond volume of the *Flora Scotica*; but when the one deſcribed, and the other figured it as a ſpecies, they expreſſed their doubts of its being ſuch: SCOPOLI alſo is of opinion that the *reptans* is no other than a variety, ariſing from ſoil and ſituation.

The leaves are uſually toothed, eſpecially the upper ones; ſometimes they may be found entire, and ſometimes more deeply indented, or ſerrated on their edges; the variety in this latter ſtate the old authors deſcribe, and figure as a ſpecies.

Inſtinct rarely fails in directing graminivorous animals to reject ſuch herbs as would prove injurious to them, hence we ſeldom find this and the other acrid ſpecies of Crow-Foot eaten by cattle, but we know that under certain circumſtances they will ſometimes err, and become poiſoned or diſeaſed: GERARD ſays, "this plant is called *Banewort* by ſome, bicauſe it is dangerous and deadly for ſheepe, and that if they feede of the ſame, it inflameth their livers, fretteth and bliſtereth their guts, and entrailes:" DODONÆUS, from whom GERARD probably borrows this account, reports the ſame, and that the plant takes its name in the Netherlands, from its pernicious effects on this harmleſs and uſeful race: HALLER quotes an author (*Le Noble lact p.* 12.) who ſays, that the livers of horſes which had fed on this Ranunculus became rotten, and full of little bladders of water, as well as ſmall animals reſembling flounders; if the rot in ſheep be occaſioned by their feeding on any particular plant. and authors be not miſtaken in what they ſay of this, none appears more likely to occaſion it than the preſent one. Kine* are ſaid to feed on it without injury.

Acrid as this Ranunculus is, and injurious as it may be to the larger animals, we obſerved on the 9th of laſt July, 1791, ſmall black larvæ feeding on its flower buds and ſtamina, in thoſe little kind of dells on Barnes-Common, where the water had been dried up, and where grew *Callitriche*, *Peplis*, *&c.* we ſuſpect they were the larvæ of ſome coleopterous inſect; and on the under ſide of a leaf of another plant of the ſame ſpecies, we diſcovered a cluſter of eggs, ſixty-four in number, depoſited moſt probably by ſome ſpecies of moth; the leaves of this and of every other ſpecies of Ranunculus growing wild, or in our gardens, are yearly diſfigured, and in ſome ſeaſons deſtroyed by a very minute intercutaneous larva or maggot, producing a ſmall fly, which we have named *Muſca ranunculi*, and of whoſe hiſtory it is our intention to give an account elſewhere; we have repreſented one of the leaves on the plant as it appears marked by this inſect.

Mr. LIGHTFOOT informs us, that the *Ranunculus Flammula* is uſed in many parts of the highlands to raiſe bliſters; for this purpoſe, in the iſland of Jura, and other parts on the coaſt, the leaves are well bruiſed in a mortar, and applied in one or more limpet ſhells to the parts where the bliſters are to be raiſed.

* Boves autem licet magnam comedunt hujus copiam ab hac affici non obſervavi. *Brugm.*

SCILLA AUTUMNALIS. AUTUMNAL SQUIL.

SCILLA. *Linn. Gen. Pl.* HEXANDRIA MONOGYNIA.

Cor. 6-petala, patens, decidua. *Filamenta* filiformia.

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

SCILLA *autumnalis* foliis filiformibus linearibus, floribus corymbosis, pedunculis nudis adscendentibus longitudine floris. *Linn. Syst. Vegetab. ed.* 14. *Murr. p.* 329. *Sp. Pl.* 443.

HYACINTHUS stellaris autumnalis minor. *Bauh. Pin. p.* 47. et major ejusd. *p.* 46.

HYACINTHUS autumnalis major et minor. *Clus. Hist.* 1. *p.* 185. *fig.* 1, 2. *Magn. Bot. Monsp. p.* 134.

HYACINTHUS autumnalis. Winter Hyacinth.—autumnalis major. Great Winter Hyacinth. *Ger. Herb. p.* 98. *f.* 3, 4. *emac.* 110. *fig.* 1, 2.

HYACINTHUS autumnalis minor. The lesser Autumn Jacinth. *Park. Parad. p.* 132.

RADIX bulbus subrotundus, albidus, tunicatus, sapore subdulci, mucilaginosus, fibrillis albidis.

ROOT a roundish bulb, of a whitish colour, coated, of a sweetish taste and mucilaginous, the fibres whitish.

FOLIA plurima, radicalia, linearia, scapo breviora, glabra, interne canaliculata, externe convexa, striata, recurva, obtusiusscula.

LEAVES numerous, from the root, linear, shorter than the scapus, smooth, internally concave, externally convex and striated, bent back, somewhat blunt at the points.

SCAPUS subtriuncialis, erectus, teres, striato-angulosus, ad lentem villosus, nudus, inferne ex albo-viresсens, superne purpurascens.

SCAPUS about three inches high, upright, round, between scored and angular, villous if magnified, naked, below of a whitish green colour, above purplish.

FLORES 5—12 racemosi, e purpureo-cærulescentes.

FLOWERS from 5 to 12, growing in a racemus, of a blueish purple colour.

PEDUNCULI adscendentes, longitudine floris, ebracteati.

PEDUNCLES ascending, the length of the flower, without a bractæa.

COROLLA: PETALA sex, ovata, quorum tria paulo angustiora, obtusiusscula, apice callosa, e viridi fusca, *fig.* 1.

COROLLA: six PETALS, ovate, three of which are a little narrower than the rest, callous and of a greenish brown colour at the tips, *fig.* 1.

STAMINA: FILAMENTA 6, purpurascentia, lata, subulata; ANTHERÆ subcordatæ, magnæ, primo saturate purpureæ, emisso polline nigricantes, *fig.* 2.

STAMINA: six FILAMENTS, of a purplish colour, broad, tapering, ANTHERÆ somewhat heart-shaped, large, at first of a deep purple colour, on shedding of the pollen blackish, *fig.* 2.

PISTILLUM: GERMEN subovatum, cærulescens, lineis sex albidis impressis notatum; STYLUS trigonus, trisulcatus, longitudine staminum; STIGMA simplex, *fig.* 3.

PISTILLUM: GERMEN somewhat ovate, blueish, marked with six impressed white lines; STYLE three-cornered, three-grooved, the length of the stamina; STIGMA simple, *fig.* 3.

PERICARPIUM: CAPSULA subrotunda, trivalvis, valvis ovatis, concavis, dissepimento per medium divisis, maturato semine patentibus, *fig.* 4.

SEED-VESSEL: a roundish CAPSULE of three valves, the valves ovate, concave, divided by a partition running through the middle, expanding wide when the seed is ripe, *fig.* 4.

SEMINA sex, duo singulam valvam implentia, majuscula, nigricantia, nitidula, trigona, latere exteriore convexo, duobus interioribus planis, *fig.* 5.

SEEDS six, two filling each valve, rather large, blackish, shining, three-cornered, the outer side convex, the two inner ones flat, *fig.* 5.

Most of the old writers who treat of the *Scilla autumnalis*, describe two kinds, a *major* and a *minor*; but as these distinctions are founded chiefly on the size of the plant, and which depends on accidental circumstances, they are not deserving of much attention. GERARD was not aware of its being a British native. PARKINSON informs us, that he found it growing on a bank by the Thames side, at the hither end of Chelsea; and he notices a variety of it with white flowers.

In Mr. RAY's Synopsis it is described to grow on Blackheath, on certain parts of which it may still be found in abundance; and, in the same work, it is said to be found plentifully on St. Vincent's-Rock, near Bristol; there also it still exists in great profusion, as I am assured by Dr. FORD, my much valued friend, who gave me this autumn many plants which he had gathered there, the bulbs of which were in general much larger than those which grow about London: it is found also near Ditton, on Moulsey-Hurst, over against Hampton-Court, and not many years since was observed sparingly on Kew-Green.

It usually grows in pastures where the soil is a light and not very fertile loam; in its wild state it rarely exceeds three inches in height, cultivated it acquires twice its usual size, and from one bulb spring several stems: it begins to flower about the third week in August, and continues in blossom three weeks or a month. In most of the wild specimens the flowering stalks come up without the leaves, in some few the leaves accompany them, and afterwards acquiring their full size, appear above ground the greatest part of the year; but, being small and grassy, they do not readily lead to a discovery of the plant.

Such as are desirous of cultivating this little herald of autumn, may raise it from seeds, which it produces in plenty, and from which CLUSIUS informs us, that he obtained flowering plants the third year; it may be increased also, though slowly, by its bulbs, which should be planted in a light loamy soil, and placed in a dry part of the garden; the best mode is to plant the bulbs in a pot of suitable earth, and plunge them in the border, they will thus be secured from being lost (which, from their size, they would be apt to be) when the border is dug up; the same treatment is applicable to any other small hardy bulbs.

Scilla autumnalis

Hieracium umbellatum

HIERACIUM UMBELLATUM. BUSHY HAWKWEED.

HIERACIUM. *Linn. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* imbricatus, ſubinde calyculatus, ovatus. *Pappus* ſimplex, ſeſſilis.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

HIERACIUM *umbellatum* foliis linearibus ſubdentatis ſparſis, floribus ſubumbellatis. *Linn. Syſt. Vegetab. p.* 719. *Sp. Pl. p.* 1131. *Fl. Suec.* 704. *Hall. Hiſt. n.* 34.

HIERACIUM majus anguſtifolium. *Cluſ. Hiſt.* 2. *p.* 40.

HIERACIUM fruticoſum anguſtifolium majus. *Baub. Pin.* 129. *Park.* 801.

HIERACIUM primum. *Dod. Pempt. p.* 638.

HIERACIUM Intybaceum. *Ger. Herb. p.* 234. *f.* 6. Endives Haukeweede, *emac. n.* 298. *f.* 5.

PULMONARIA anguſtifolia glabra. *Petiv. H. B.* 13. 11.

PULMONARIA graminea. *Petiv. H. B.* 13. 12. *Raii Syn. p.* 168. Narrow-leav'd buſhy Hawkweed. *Hudſon Fl. Angl. ed.* 2. *p.* 346. *Lightfoot Fl. Scot. p.* 439.

RADIX perennis, fibroſa, fibris longis, ſimpliciuſculis, undique divergentibus, fuſcis.

ROOT perennial, fibrous, fibres long, moſtly ſimple, ſpreading on all ſides, of a brown colour.

CAULIS pedalis, ad tripedalem et ultra, erectus, foliоſus, rigidus, viridi-purpuraſcens, inferne lævis, ſimplex, ſuperne ſcabriuſculus, ramoſus; ſæpe gibbo inſigni ab inſecto quodam formato deformis.

STALK from one to three feet high or more, upright, leafy, rigid, of a greeniſh purple colour, below ſmooth, ſimple, above roughiſh and branched, often deformed by one or more tubercles occaſioned by ſome inſect.

FOLIA numeroſa, ſparſa, erectiuſcula, ſeſſilia, linearia, aut lanceolato-linearia, plus minus remote et obſolete dentata, nonnunquam integerrima, venoſa, ſupra lævia, ſubtus ſcabriuſcula, margine ſetulis rigidis ciliata.

LEAVES numerous, placed in no regular order, ſomewhat upright, ſeſſile, linear, or lanceolate-linear, more or leſs remotely and faintly toothed, ſometimes perfectly entire, veiny, above ſmooth, beneath roughiſh, edged with minute rigid hairs.

FLORES majuſculi, lutei, in pedunculis ramoſis.

FLOWERS rather large, yellow, on branched flower-ſtalks.

PEDUNCULI varie diviſi, inæquales, umbellas ſpurias ſubinde repreſentantes, ſuperne parum incraſſati, ſquamula folioſa una alterave inſtructi.

PEDUNCLES variouſly divided, unequal, ſometimes repreſenting a ſort of umbel, above ſlightly thickened, furniſhed with one or more leafy ſcales.

CALYX ovatus, baſi parum ventricoſus, e livido aut nigricante virens, imbricatus, foliolis exterioribus reflexis.

CALYX ovate, bellying out ſomewhat at the baſe, of a livid or duſky green colour, imbricated, the outer leaflets or ſcales turned back.

COROLLA: compoſita, æqualis; COROLLULÆ hermaphroditæ, monopetalæ, ligulatæ, truncatæ, quinquedentatæ, *fig.* 1.

COROLLA: the general one compound and equal; the FLORETS hermaphrodite, monopetalous, ligulate, truncated, and five-toothed, *fig.* 1.

STAMINA: FILAMENTA 5, capillaria, intra tubum Corollæ; ANTHERÆ in cylindrum coalitæ, fuſco-luteæ.

STAMINA: five capillary FILAMENTS, within the tube of the Corolla; ANTHERÆ forming a cylinder, of a browniſh yellow colour.

PISTILLUM: GERMEN ſubovatum; STYLUS filiformis, ſtaminibus longior; STIGMATA duo, recurva, *fig.* 2.

PISTILLUM: GERMEN ſomewhat ovate; STYLE filiform, longer than the ſtamina; STIGMATA two, turned back, *fig.* 2.

SEMINA oblonga, nigricantia; PAPPUS ſimplex, ſeſſilis, luteſcens, *fig.* 3.

SEEDS oblong, blackiſh; DOWN ſimple, ſeſſile, yellowiſh, *fig.* 3.

The *Hieracium umbellatum* grows on dry, ſandy, or gravelly heaths, and in uncultivated places near London: in ſuch ſituations, and in ſuch only, we have obſerved it about Hampſtead, Barnet, and Charlton; in the old ſand pits near the bottom of the lane leading down from Charlton-Church, on the left-hand ſide, it may be found in great plenty.

It varies in ſize, from one to three feet or more; in the ſmaller ſpecimens the leaves are more entire, frequently altogether ſo, and the ſtalk is ſometimes ſimple and uniflorous; in the larger ones the ſtalk is much branched, and the leaves are more toothed, or jagged, when cultivated in a garden, where it grows moſt readily: it loſes in common with moſt of the plants of the ſame claſs, its natural character, and eſpecially its umbellated appearance, which indeed it rarely has in perfection; the moſt obvious character of the ſpecies conſiſts in the narrowneſs of its leaves.

It flowers in Auguſt and September.

Its ſtalks are very frequently beſet with gouty tubercles of various forms and ſizes, which contain within them a number of ſmall maggots, in different cells, and which moſt probably produce ſome ſpecies of Cynips.

LINNÆUS notices its being uſed in Scania as a dye, communicating to woollen an elegant and beautiful colour, *Fl. Suec.*

CARDUUS POLYACANTHOS. PRICKLIEST THISTLE.

CARDUUS. *Linn. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.
Calyx ovatus, imbricatus, squamis spinosis. *Recept.* pilosum.
Raii Syn. Gen. 9. HERBÆ FLORE EX FLOSCULIS FISTULARIBUS COMPOSITO SIVE CAPITATÆ.

CARDUUS *lanceolatus* foliis decurrentibus margine spinosis, ramis patulis, calycibus subrotundis laxis, squamis subulatis patentibus subinermibus.

CARDUUS *acanthoides* foliis decurrentibus sinuato-pinnatifidis margine spinosis, calycibus solitariis pedunculatis erectis villosis. *Linn. Sp. Pl. ed.* 3. *p.* 1150. *Fl. Suec. ed.* 2. *n.* 718. *Jacq. Fl. Austr. V.* 3. *t.* 249. *polyacanthos. Schrk. Lips. p.* 15.

CARDUUS *crispus. Linn. Lightfoot Scot. V.* 1. *p.* 452.

CARDUUS *crispus* foliis decurrentibus sinuatis margine spinosis, calycibus globosis pedunculatis solitariis erectis. *Hudson Fl. Angl. ed.* 2. *p.* 350.

CARDUUS caule crispo. *J. B.* 3. *p.* 50. *Raii Hist. V.* 1. *p.* 309. *Syn. ed.* 3. *p.* 194.

CARDUUS spinosissimus angustifolius vulgaris. *Bauh. Pin.* 385. ?

CARDUUS spinosissimus vulgaris Polyacantha. *Theophrast. Lob. Ic.* 21.

POLYACANTHA Theophrasti. *Tabern. Ic.* 701.

CARDUUS polyacanthos capitulis pluribus nutantibus ramosior. *Morif. Ox. III.* 153. *n.* 11.

ONOPORDON. Thistle upon Thistle. *Ger. Herb. p.* 1010.

CARDUUS polyacanthos. The most prickly Thistle. *Park. Th. p.* 981. *n.* 5.

CARDUUS sylvestris primus. *Dod. p.* 739. *f.* 1. *Ger. emac. p.* 1173.

RADIX annua, simplex, albida, pluribus fibris capillata.

ROOT annual, simple, whitish, furnished with numerous fibres.

CAULIS 2-4 pedalis et ultra, erectus, levissime sulcatus, hirsutus, 4-5 fariam alatus, alæ laciniatæ, spinosissimæ, fistulosus, sæpe usque ad basin ramosus; Rami prælongi, patentes, apice floriferi.

STALK from two to four feet high or more, upright, very slightly grooved, hirsute, furnished with four or five wings, which are jagged and extremely prickly, branched, often to the bottom; Branches very long, spreading, producing flowers at their extremities.

FOLIA sessilia, decurrentia, lanceolata, incisо-lobata, lobis oppositis, sinuato-dentata, crispatula, margine spinosa, supra viridia, subtus albida, hispido-tomentosa.

LEAVES sessile, decurrent, lanceolate, cut into lobes, which are opposite, scolloped, toothed, and a little curled, spinous on the edge, above green, beneath whitish, and somewhat woolly.

FLORES mediocres, terminales, plerumque aggregati, purpurei, odorati, sessiles, aut breviter pedunculati, erecti aut subnutantes.

FLOWERS middle-sized, terminal, for the most part clustered, purple, odoriferous, sessile or standing on short footstalks, upright or somewhat drooping.

CALYX *communis* subrotundus, laxe imbricatus, squamis subulatis, reflexo-patulis, subtomentosis, mitibus.

CALYX *common* to all the florets, nearly round, loosely imbricated, scales tapering to a point, spreading, and somewhat reflexed, slightly cottony, and harmless.

COROLLA composita, tubulosa, uniformis, calyce duplo longior; *Corollulæ* hermaphroditæ, subæquales, reflexæ, *fig.* 1.

COROLLA compound, tubular, uniform, as long again as the calyx; *Florets* hermaphrodite, nearly equal, and reflexed, *fig.* 1.

SEMEN oblongum, læve, pallide fuscum, leviter striatum, utrinque obtusum; *Pappus* simplex, *fig.* 2. auct. *fig.* 3.

SEED oblong, smooth, of a pale brown colour, slightly striated, blunt at both ends; *Down* simple, *fig.* 2. magn. *fig.* 3.

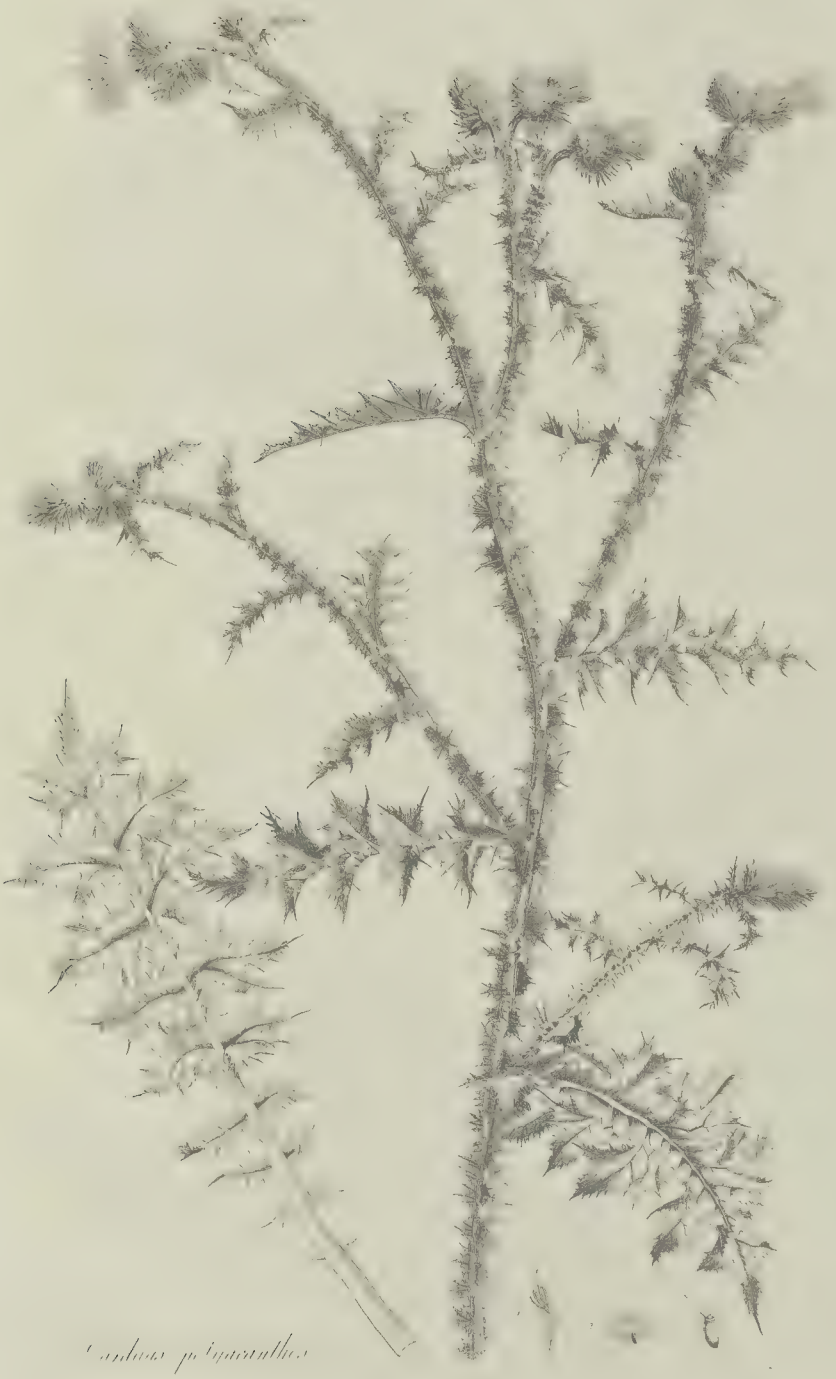
The prickly armour worn by most of the Carduï, renders them a truly formidable tribe; our Northern brethren have chosen the Thistle as an emblem of their motto, "*Nemo me impune lacessit*:" there is however a considerable difference in the strength and number of their spines in different species, in some they are so few, and those so short, and soft, that the plant may be handled with perfect safety; while in others they are so sharp, and so completely beset every part of the plant, that it cannot even be touched without the greatest caution: of the latter kind is the present species, which divers of the ancient Botanists distinguished by the name of *polyacanthos* (*many spined*) a word, in its strict sense applicable to various other species; but by this expression they doubtless meant prickly in the extreme, *quasi spinosissimus*, conformable to which is the old English name of *Thistle upon Thistle*. On comparing this species with all our English Thistles, as they grew together in my garden, I found that the spines in this were actually more numerous than in any of the rest, though the *palustris* was not much inferior to it in point of number; the term, therefore, as far as regards our English Thistles, is founded in propriety.

Professor SCHREBER, author of the best treatise on Grasses the world ever saw, of the eighth edition of the *Genera Plantarum* of LINNÆUS, and of many other inestimable treatises in Botany and Natural History, in treating of this Thistle, has adopted the above-mentioned name of *polyacanthos*; he regards it at the same time as the *acanthoides* of LINNÆUS, which name he relinquishes, because he considers it as more properly belonging to the *acanthoides* of J. BAUHINE (our *tenuiflorus*).

This species is very common in the environs of London, by the sides of roads, on the borders of fields, and under hedges, flowering from June to September: it is sometimes found with white flowers, and according to situation is observed to vary in size from two to five or more feet, to be more or less hairy, and to have its flowers more or less clustered.

In its general appearance it approaches near to the *palustris*, with which students are apt to confound it, and from which it may be distinguished in various ways: its place of growth serves to discriminate it, as it affects dry, not moist situations, in which alone the *palustris* is found; it is more branched, and the extreme flowering branches are more bowed or bent downwards, as our figure represents; but this character is not to be depended on solely, they being often perfectly upright, as figured by Professor JACQUIN: the Calyx affords the most unerring mark of distinction between the two, the scales in that of the *palustris* are closely imbricated, as in the *arvensis*, *acaulis*, and some others, while in the present plant they are loose, much resembling those of the Burdock, and almost as harmless; RAY, who has described it most admirably, observes also, that the flowers are more odoriferous.

We last summer observed the larva of the *Papilio Cardui*, feeding abundantly on its foliage. In an agricultural point of view, it is scarcely worth noticing, being an annual, and seldom abounding either in fields or gardens.



Carduus tenuiflorus

CARDUUS TENUIFLORUS. SLENDER-FLOWER'D THISTLE.

CARDUUS. *Linn. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Calyx ovatus, imbricatus, ſquamis ſpinoſis. *Recept.* piloſum.

Raii Syn. Gen. 9. HERBÆ FLORE EX FLOSCULIS FISTULARIBUS COMPOSITO SIVE CAPITATÆ.

CARDUUS *tenuiflorus* foliis decurrentibus margine ſpinoſis, ramis ſtrictis, calycibus aggregatis ſeſſilibus oblongo-conicis, ſquamis erecto-patulis pungentibus.

CARDUUS *acanthoides* foliis decurrentibus pinnatifidis, margine ſpinoſis, calycibus aggregatis ſeſſilibus ſubcylindricis glabris. *Lightfoot Fl. Scot. V.* 1. *p.* 451. Greywelted Thiſtle.

CARDUUS *acanthoides* foliis decurrentibus ſinuato-dentatis, margine ſpinoſis, calycibus ovatis terminalibus aggregatis ſeſſilibus, ſquamis acuminatis erectiuſculis. *Hudſon Fl. Angl. ed.* 2. *p.* 351. Welted Thiſtle.

CARDUUS alis caulinis latiſſimis, foliis ſemipinnatis, pinnis anguloſis, ſpinoſis, floribus longis, faſciculatis. *Hall. Hiſt.* 166.

CARDUUS acanthoides. *J. Bauh. Hiſt.* 3. *p.* 516.

CARDUUS ſpinoſiſſimus capitulis minoribus. *P. B. Raii Hiſt. V.* 1. *p.* 309. *Syn. ed.* 3. *p.* 194. Welted Thiſtle with ſmall flowers.

CARDUUS polyacanthos, capitulis longioribus et tenuioribus foliis albicantibus. *Moriſ. Hiſt.* 3. *p.* 153.

RADIX annua.
CAULIS bi-tripedalis, erectus, baſi ramoſus, ramis paucis, ſubelongatis, erectis, ſtrictis, teretiuſculis, leviter ſulcatis, tomentoſis, maxime verſus ſummitates, alatis, alis latis, ſpinoſis.

FOLIA caulina ſeſſilia, decurrentia, venoſa, ſupra glabriuſcula, viridia, pilis adpreſſis albidis obſita, ſubtus tomentoſa, coſta albida, margine ſinuata, dentata, ſpinoſa, ſpinis longis, luteſcentibus; radicalia ovato-oblonga, obtuſa, inciſo-lobata, lobis latis, obtuſis, confluentibus.

FLORES in ramorum ſummitatibus congeſti, ſeſſiles, parvi, pallide purpurei, aut carnei.
CALYX: *communis* oblongo-conicus, imbricatus, ſquamis erecto-patulis, lineari-elongatis, ſpinoſis, baſi albidis, medio viridibus, apice in ſpinas luteſcentes longitudine floſculorum exeuntibus.
COROLLA compoſita, tubuloſa, uniformis; *Corollulæ* hermaphroditæ, ſubæquales, *fig.* 1.
SEMINA et *Pappus* eadem fere ut in Card. Polyacanth. *fig.* 2.

ROOT annual.
STALK from two to three feet high, upright, branched at the baſe, branches few, long, upright, perfectly ſtraight, roundiſh, ſlightly grooved, cottony, particularly towards the tops, winged, wings broad and ſpinous.

LEAVES of the ſtalk ſeſſile, decurrent, veiny, above ſmoothiſh, green, beſet with whitiſh hairs preſſed cloſe, beneath cottony, the midrib whitiſh, the edge ſcolloped, toothed, and ſpinous, ſpines long and yellowiſh; radical leaves ovato-oblong, obtuſe, divided into lobes which are broad, obtuſe, and cloſing together.

FLOWERS in cluſters on the tops of the branches, ſeſſile, ſmall, of a pale purple or fleſh-colour.
CALYX: *common* to all the florets of an oblong-conical ſhape, imbricated, ſcales upright, ſpreading at top, long and linear, ſpinous, whitiſh at the baſe, green in the middle, and terminating in yellow ſpines the length of the florets.
COROLLA compound, tubular and uniform; the *Florets* hermaphrodite, and nearly equal, *fig.* 1.
SEEDS and *Down* nearly the ſame as in the pricklieſt Thiſtle, *fig.* 2.

J. BAUHINE appears to be the firſt writer who accurately determined this Carduus, which he calls *acanthoides*; RAY afterwards gave an excellent deſcription of it in his *Hiſt. Pl.* and MORISON characteriſtically defined it in his *Hiſt. Oxon.* LINNÆUS in his *Spec. Pl. ed.* 3. applies J. BAUHINE's name of *acanthoides* to a very different Thiſtle, our *polyacanthos*, referring to it at the ſame time the ſynonyms of J. BAUHINE, RAY, and MORISON, which truly belong to the preſent ſpecies (vid. ſynon.) and which it is probable LINNÆUS never ſaw, as it is not a Swediſh plant, nor a very general European one; Mr. LIGHTFOOT finding LINNÆUS's deſcription not to accord with our plant, gave a new ſpecific deſcription to it, retaining the name *acanthoides*, and Mr. HUDSON does the ſame; it may therefore be expected, that we ſhould continue the term *acanthoides* firſt impoſed, and ſo far properly belonging to it, but we are too friendly to reform ſo to do, conceiving that the term *tenuiflorus* will almoſt of itſelf diſcriminate the ſpecies, while *acanthoides* means comparatively nothing, we make no ſcruple to change the name.

This thiſtle is a very common one in the environs of London, growing in the very ſuburbs; it affects warm, ſheltered ſituations, and is therefore moſt frequently found at the foot of paling, walls, hedges, and on ditch banks, flowering from June to Auguſt: Dr. GOODENOUGH obſerves to me, that he has found it to be a common plant near the ſea ſide, but rare in the more interior parts of the kingdom; this probably ariſes from its being a ſomewhat tender plant.

It is obviouſly diſtinguiſhed from all our other Cardui by its upright mode of growth, by the breadth of the wings on its ſtalks, whence its name of welted, the greyiſh appearance of its foliage, and, above all, by its long, cluſtered heads, producing ſmall flowers, of a pale purple or fleſh colour, little longer than the very ſharp ſpines of its calyx.

Size excepted, we have not found it ſubject to much variation.

We often meet with ſpecimens much larger, and with more numerous flowers, than is ſhewn in our figure, which is not intended to repreſent the plant in its moſt luxuriant ſtate.

The Farmer or Gardener have little or no cauſe to complain of it.

VALERIANA OFFICINALIS. WILD VALERIAN.

VALERIANA. *Linn. Gen. Pl.* TRIANDRIA MONOGYNIA.
Cal. 0. *Cor.* 1. petala, basi hinc gibba, supera.
Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS, SEU AD SINGULOS FLORES SINGULIS.

VALERIANA *officinalis* floribus triandris, foliis omnibus pinnatis. *Linn. Syst. Vegetab. ed.* 14. *Murr. p.* 80. *Sp. Pl. ed.* 2. *p.* 40. *Fl. Suec. n.* 34. *Scop. Fl. Carn. ed.* 2. *n.* 39. *Berg. Mat. Med. p.* 30. *Hudson Fl. Angl. ed.* 2. *p.* 12. *Lightfoot Scot. V.* 1. *p.* 85.

VALERIANA foliis pinnatis, pinnis dentatis. *Hall. Hist. n.* 210.

VALERIANA sylvestris major. *Bauh. Pin.* 164. *Ger. Herb. p.* 917. *fig.* 2. Great Wilde Valerian, *emac.* 1075. *fig.* 2. *Threlk Syn.*

VALERIANA sylvestris. Wilde Valerian. *Park. Th. p.* 123. *f.* 13.

VALERIANA sylvestris magna aquatica. *J. Bauh. III.* 2. 211. *Raii Syn. ed.* 3. *p.* 200. Great Wild Valerian.

RADIX perennis, subpræmorsa, fibrosa, fibris plurimis, majusculis, stolonem unum alterumve longe protensum e caudice emittens.

ROOT perennial, somewhat stumped, fibrous, fibres numerous, large, sending out from its crown one or more long-extended creeping shoots.

CAULIS pedalis ad tripedalem, et ultra, erectus, teres, sulcatus, fistulosus, hinc hirsutulus, terminans in ramos floriferos brachiatim dispositos.

STALK from one to three feet or more in height, upright, round, grooved, hollow, in some parts hairy, terminating in flowering branches disposed crosswise.

FOLIA opposita, connata, basi subtus barbata, pinnata; Costa leviter pubescens; Foliola 11 ad 13, nunc opposita, nunc alterna, subdecurrentia, lanceolato-oblonga, acutiuscula, inæqualiter remoteque dentata, venoso-rugosa, subtus pallidiora, pilosiuscula, foliolum terminale trilobatum; Folia suprema floralia trifida, et subsimplicia.

LEAVES opposite, connate, bearded at the base on the under side, pinnated; the Midrib somewhat downy; the Leaflets or Pinnæ 11 to 13, sometimes opposite, sometimes alternate, slightly decurrent, lanceolate-oblong, rather pointed, unevenly and distantly toothed, veiny, wrinkled, paler on the underside, slightly hairy; the terminating Leaflet three-lobed; the uppermost leaves on the flowering branches trifid, and sometimes entire.

FLORES subcorymbosi terminales, albido-carnei, odore singulari præditi; PEDUNCULI ramosissimi, multoties dichotomi.

FLOWERS growing in a kind of corymbus, terminal, of a pale flesh colour, and singular smell; FLOWER-STALKS much branched, and many times divided.

BRACTEÆ lanceolatæ, acuminatæ, connatæ, albentes, nervo viridi.

FLORAL-LEAVES, lanceolate, acuminated, connate, whitish, with a green midrib.

CALYX nullus, margo superus minutus, *fig.* 1.

CALYX none, a slight margin on the top of the Germen, *fig.* 1.

COROLLA tubulosa, tubo a latere inferiore nectarifero, gibbo, *fig.* 2. *Limbo* quinquefido, laciniis obtusis, *fig.* 3.

COROLLA tubular, the tube producing from its lower side a gibbous nectary, *fig.* 2. the *Limb* divided into five obtuse segments, *fig.* 3.

STAMINA: FILAMENTA tria, erecta, Corollâ longiora, amisso polline recurvantia; ANTHERÆ subrotundæ, floribus concolores, *fig.* 4.

STAMINA: three upright FILAMENTS, longer than the Corolla, bending back when the antheræ have shed their pollen; ANTHERÆ roundish, of the same colour as the flowers, *fig.* 4.

PISTILLUM: GERMEN conicum, inferum; STYLUS filiformis, longitudine staminum; STIGMA crassiusculum, obtusum, album, trifidum, *fig.* 5.

PISTILLUM: the GERMEN conic, beneath the Corolla, STYLE thread-shaped, the length of the stamina; STIGMA thickish, obtuse, white, and trifid, *fig.* 5.

SEMINA solitaria, ovato-oblonga, compressa; *Pappus* radiis duodecim plumosis, basi purpurascentibus, *fig.* 6.

SEEDS single, ovato-oblong, compressed, furnished with a *Pappus* having twelve feathery rays, of a purplish colour at the base, *fig.* 6.

The *Valeriana officinalis* here figured, grows wild with us in wet situations only, it more especially is found on the edges of wet ditches, often in osier-grounds, and in such situations is very common in most of the Southern parts of Great-Britain; sometimes, particularly in the Northern parts of the kingdom, it is found on more elevated and drier ground, where it becomes in every respect smaller, and more hairy; in such situations the roots are found to possess more fragrance, and are considered as preferable for medicinal purposes.

The flowers, when fresh, diffuse a peculiar kind of odour, almost too strong to be pleasant; the powerful smell of the dried root is known to most persons, and of this part of the plant cats are remarkably fond, not only eating it, but when they have an opportunity, perfuming themselves by rolling on it, and that on the fresh as well as dried roots; for I have often observed, that as the roots spread out near the surface of the ground, they find them out, and in gratifying their passion frequently destroy the plant in gardens; whenever they are insufferably mischievous in this or other respects, they may with certainty be caught in a wooden hutch trap, baited with Valerian root; we are not however wantonly to sacrifice this useful animal.

The *officinalis*, as well as some of the other species of Valerian, is very ornamental, but almost too large for the flower-garden, unless it be an extensive one; it flowers in June and July, and is easily cultivated, as it has creeping roots, which for medicinal purposes should be taken up early in the spring and carefully dried.

The mountain Valerian root has a strong, not agreeable smell, and an unpleasant, warm, bitterish, subacrid taste; the strength of the smell and taste is the only mark to be depended on of its genuineness, and goodness. It is a medicine of great esteem in the present practice against obstinate hemicraniæ, hysterical and the different kinds of nervous disorders, and is commonly looked upon as one of the principal antispasmodics. COLUMNA reports, that he was cured by it of an inveterate epilepsy, after many other medicines had been used in vain: on more extensive trials it has been found, in some epileptic cases to effect a cure, in several to abate the violence or frequency of the fits, and in many to prove entirely ineffectual: oftentimes, it either purges, or operates by sweat, or by urine, or brings away worms before it prevents a fit. The dose of the root in powder is from a scruple to a dram or two, which may be repeated if the stomach will bear it, two or three times a day. A remarkable instance of its efficacy in a Catalepsy is given by Mr. MUDGE: doses of half an ounce of the powder were exhibited twice a day, and a less quantity was found ineffectual.—Among the materials I have made trial of for covering its flavour, mace seemed to answer the best. *Lewis's Mat. Med. ed. Aik. p.* 659.

Dr. CULLEN considers it as an antispasmodic medicine of considerable efficacy, but observes, that he has frequently found it inefficacious, which he attributes partly to the best remedies failing in diseases which depend on a diversity of causes, and partly to the roots being employed in an improper condition; he is of opinion that it should be given in larger doses than is commonly done.

Valeriana officinalis

Primula officinalis

PRIMULA OFFICINALIS. The COWSLIP.

PRIMULA. *Linn. Gen. Pl.* PENTANDRIA MONOGYNIA.

Involucrum umbellulæ. *Corollæ* tubus cylindricus, ore patulo.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

PRIMULA *officinalis* foliis rugosis dentatis subtus hirsutis, scapo multifloro, floribus omnibus nutantibus, corollæ limbo brevi. *Jacq. Misc. Austr. V.* 1. *p.* 159. *n.* 3. *Ait. Kew. V.* 1. *p.* 193.

PRIMULA foliis rugosis dentatis hirsutis, scapis multifloris, floribus omnibus nutantibus. *Hall. Hist. n.* 610.

PRIMULA *officinalis* foliis rugoso dentatis, limbo corollarum concavo, tubi collo oblongo. *Hoff. Germ. Fl. p.* 67.

PRIMULA *officinalis*. *Scop. Carn. ed.* 2. *n.* 205.

PRIMULA *veris* foliis rugosis dentatis. *Linn. Sp. Pl.* 204. *var.* α *officinalis* limbo corollarum concavo. *Syst. Vegetab. ed.* 14. *Murr. p.* 192. *Hudf. Fl. Angl. p.* 84. *veris.*

VERBASCULUM pratense odoratum. *Bauh. Pin.* 241.

PRIMULA veris flavo flore elatior. *Clus. Hist.* 1. *p.* 301.

PRIMULA veris odorata flore luteo simplici. *I. B. III.* 495.

PARALYSIS vulgaris pratensis, flore flavo simplici odorato. *Park. Parad.* 244. The common field Cowslip.

PRIMULA veris major. Field Cowslips. *Ger. Herb. p.* 635. *fig.* 1. but *fig.* 2. more resembles the plant; *emac.* 780. *f.* 1. *Threlk. Raii Syn.* 284. Common Paigles, or Cowslips.

RADIX similis Primulæ acaulis, sed odore fortiori anisi prædita.

ROOT like that of the Primrose, but smelling more powerfully of aniseed.

FOLIA subcordato-ovata, ad basin contracta, tunc decurrentia, structura foliis P. acaulis similia, sed dimidio fere breviora, margine pleniore, plicato-crenulato, validiora, obscurius viridia, basi non attenuata, subtus pilis mollioribus et brevioribus vestita; Petioli glabriores, albidi, vix rubentes.

LEAVES somewhat heart-shaped-ovate, contracted at the base, then decurrent, in their structure like those of the Primrose, but shorter by nearly one half, fuller at the edge, which is somewhat folded as well as notched, stronger, of a deeper green, not running so taper at the base, covered on the underside with softer and shorter hair; the Leaf-stalks smoother, whitish, with scarcely any red in them.

FLORES parvi, nutantes, subsecundi, lutei, suaviter odorati.

FLOWERS small, hanging down, and generally to one side, yellow, and fragrant.

SCAPI erecti, foliis 3plo aut 4plo longiores, pallidi, villosi, umbelliferi, multiflori.

STALKS upright, 3 or 4 times longer than the leaves, pallid, villous, supporting many flowers in an umbel.

STIPULÆ ad exortum umbellæ, pedunculos cingentes, parvæ, acuminatæ.

STIPULÆ at the base of the umbel, surrounding the peduncles, small and tapering to a point.

PEDUNCULI subunciales, villosi, pallidi.

PEDUNCLES about an inch in length, villous, and pallid.

CALYX: PERIANTHIUM monophyllum, subcampanulatum, ventricosum, laxum, pentagonum, villosum, quinquefidum, laciniis ovatis, acutis, *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, somewhat bell-shaped, bellying out a little, fitting loosely about the tube of the Corolla, five-cornered, villous, divided into five ovate, pointed segments, *fig.* 1.

COROLLA monopetala: *Tubus* uti in Acauli, calyce paulo longius: *Limbus* vero brevissimus, concavus, flavus, maculis, quinque parvis, distinctis, aurantiacis, ad basin notatus. *Faux* simplex, absque corona, *fig.* 2, 3, 4.

COROLLA monopetalous: *Tube* as in that of the Primrose, a little longer than the calyx: the *Limb* very short, concave, yellow, marked at the base with five small distinct orange-coloured spots, the *Mouth* simple, without any crown, *fig.* 2, 3, 4.

STAMINA et Pistillum uti in Acauli, *fig.* 5, 6.

STAMINA and Pistillum as in the Primrose, *fig.* 5, 6.

In speaking of the Primrose, we had occasion to notice the place of growth, and time of flowering of the Cowslip; respecting the latter, we may add, that it is found in moist meadows, as well as upland pastures, and the borders of fields, and sometimes in that abundance as considerably to diminish their produce; hence, with all our partiality for this universal favourite, we hesitate not to pronounce it a plant noxious in agriculture; for, by the spreading of its leaves, it occupies much ground, while its produce is insignificant, and not relished by cattle, *vid. Pan. Suec.*

It retains its character when introduced into the garden, colour excepted, which it has a tendency to change, first to an orange brown, or tawny, and finally to a deep red; Mr. MOONE, who has long cultivated it, amidst a profusion of rare and valuable plants, in his garden, Hyde-Park, assures me, that it has constantly undergone this and no other change with him.

Both GERARD and PARKINSON, figure a variety of it with blossoms perfectly double, and which appears to have been common in our gardens when they wrote, though extremely scarce, if existing now; we possess a hose and hose variety with yellow, and another with deep scarlet blossoms, almost equal in beauty to those of the *Cyclla pulchella*, and we have had one plant of the common Cowslip, which from the same root produced some flowers on peduncles, and others on a scapus.

The

The bloſſoms of the Cowſlip, in its wild ſtate, uſually hang to one ſide; this appearance has in part been noticed even by Poets (who, in general, have not ſufficiently attended to the works of Nature) thus THOMSON in his Seaſons, *Spring*, line 443.

Then ſeek the bank where flowering Elders crowd,
Where ſcattered wild the Lily of the vale
Its balmy eſſence breathes, where COWSLIPS HANG
THE DEWY HEAD, *where purple Violets lurk.*

And MILTON, in his *Lycidas*,

Bring the rathe primroſe that forſaken dies,
The tufted crow-toe, and pale jeſſamine,
The white pink, and the panſie freakt with jet,
The glowing violet,
The muſk-roſe, and the well-attired woodbine,
WITH COWSLIPS WAN THAT HANG THE PENSIVE HEAD,
And every flower that ſad embroidery wears:
Bid amaranthus all his beauty ſhed,
And daffadillies fill their cups with tears,
To ſtrew the laureat hearſe where Lycid lies.

We have here quoted more than was barely neceſſary for our purpoſe, as it gives us an opportunity of juſtifying the remark above made; the glaring anachroniſm, if we may be allowed the expreſſion, in the blowing of ſuch plants, as Poets frequently bring together, has often appeared to us highly reprehenſible, eſpecially in thoſe whoſe grand deſign has been to repreſent the appearances, the œconomy, and the wonders of Nature in elegant verſe; every lad educated in the country knows that the Violet, the Cowſlip, and the Elder, flower at very diſtant periods; it is therefore extraordinary that THOMSON, above all others, ſhould group ſuch plants, when innumerable others preſented themſelves: from MILTON ſuch accuracy was not perhaps to be expected; we are not therefore, to be much ſurpriſed at his bringing together the *Primroſe* and the *Jeſſamine*, the produce of ſpring and ſummer.

Theſe remarks are not offered from a fondneſs for criticiſm, or from a deſire of detracting from works which have afforded us ſuch exquiſite pleaſure; nor are theſe ſelected as the only authors in which ſuch anachroniſms are to be met with, they abound in moſt poetry, and ſhould, as much as poſſible, be avoided; for though they may not be noticed by the generality of readers, they muſt be regarded as blemiſhes at leaſt by ſuch as are accuſtomed to view the works of nature with any degree of accuracy.

We notice with more pleaſure an inſtance, the reverſe of what we have thought it our duty to cenſure: SHAKESPEAR has deſcribed the bloſſoms of the Cowſlip with a degree of accuracy almoſt botanical, and has ſhewn how pleaſing the moſt trifling appearances in natural hiſtory may be rendered by an imagination like his.

The Cowſlips tall, her penſioners be,
In their gold coats ſpots you ſee,
Thoſe be rubies, fairy favours,
In thoſe freckles live their ſavours,
I muſt go ſeek ſome dew drops here,
And hang a pearl in every Cowſlip's ear.

The bloſſoms of this plant, in point of colour, are pleaſingly and truly contraſted by MILTON:

The YELLOW COWSLIP, *and the* PALE PRIMROSE.

LINNÆUS gave to this plant, which he regarded as a mere variety of the Primroſe, the name of *officinalis*, and which Profeſſor JACQUIN, and many other reſpectable Botaniſts, conſidering it as a ſpecies, have continued; it being more frequently uſed in medicine than any other of the genus.

"Cowſlip flowers have a moderately ſtrong, pleaſant ſmell, and a ſomewhat roughiſh, bitteriſh taſte, both which they impart, together with a yellow tincture, to watery and to ſpirituous menſtrua. Vinous liquors impregnated with their flavour, by maceration, or fermentation, and ſtrong infuſions of them drank as tea, are ſuppoſed to be mildly corroborant, antiſpaſmodic, and anodyne. An infuſion of three pounds of the freſh flowers in five pints of boiling water, is made in the ſhops into a ſyrup of a fine yellow colour, and agreeably impregnated with the flavour of the Cowſlips." *Lewis M. Med. ed. Aik.*

Many good houſewives in the country are in the practice of making a wine with Cowſlip flowers, to be uſed rather as a medicine than an exhilarant; for a general opinion prevails, that they poſſeſs a ſomniferous quality; hence, POPE, in his imitations of *Horace's Satires*, ſays ludicrouſly,

If the nights ſeem tedious—take a wife,
Or rather, truly, if your point be reſt,
Lettuce and Cowſlip wine—Probatum eſt.

In the Gentleman's Magazine, Vol. 58. there are ſome pleaſing lines on the Cowſlip, by a gentleman of the name of HOMER, whoſe poetical effuſions have often enriched that valuable Miſcellany; with an extract from which we ſhall cloſe our account of this plant.

Cowſlip, of all belov'd, of all admir'd,
Thee let me ſing, the homely ſhepherd's pride;
Fit emblem of the maid I love, a form
Gladdening the ſight of man; a ſweet perfume,
Sending its balmy fragrance to the ſoul.
Daughter of Spring and meſſenger of May,
Which ſhall I firſt declare, which moſt extol,
Thy ſovereign beauties, or thy ſovereign uſe?
With thee the rural dame a draught prepares,
A nectarous draught, more luſcious to my taſte
Than all thy boaſted traſh, vine-nurturing France.
Maidens with thee their auburn treſſes braid;
Or, with the daiſy and the primroſe pale,
Thy flowers entwining, weave a chaplet fair,
To grace that pole round which the village train
Lead on their dance to greet the jocund May;
Jocund I'll call it, for it lends a ſmile
To thee, who never ſmil'ſt but once a year;
I name thee not, thou poor unpitied wretch!
Of all deſpis'd*, ſave him whoſe liberal heart
Taught him to feel your wrongs, and plead your cauſe,
Departed HANWAY——Peace be to his ſoul!
Great is that man who quits the path of fame,
Who, wealth forſaking, ſtoops his towering mind
From learning's heights, and ſtretches out his arm
To raiſe from duſt the meaneſt of his kind.
Now that the Muſe to thee her debt has paid,
Friend of the poor and guardian of the wrong'd,
Back let her pleas'd return, to view thoſe ſports,
Whoſe rude ſimplicity has charms for me
Beyond the ball or midnight maſquerade:
Oft on that merry morn I've join'd their throng,
A glad ſpectator; oft their uncouth dance
Ey'd moſt attentive; when, with tawdry ſhew,
Ill-ſorted ribbons deck'd each maiden's cap,
And Cowſlip-garlands every ruſtic hat:
Who that has eyes to ſee or heart to feel,
Would change this ſimple wreath which ſhepherds wear,
Ev'n for that golden circle which ſurrounds
The temples of a king?

* The Chimney-Sweeper.

SAXIFRAGA OPPOSITIFOLIA. PURPLE SAXIFRAGE.

Linn. Gen. Pl. DECANDRIA DIGYNIA.

C. l. 5 partitus. *Cor.* 5-petala. *Caps.* 2-roſtris, 1-locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAXIFRAGA *oppoſitifolia* foliis caulinis oppoſitis imbricatis, ſummis ciliatis. *Linn. Syſt. Vegetab. ed.* 14. *Mant. p.* 112. *Sp. Pl. p.* 575. *Fl. Succ. ed.* 2. *p.* 142. *Hudſ. Fl. Angl. ed.* 2. *p.* 180. *Purple Saxifrage, Lightfoot, Scot. v.* 1. *p.* 222.

SAXIFRAGA foliis ovatis quadrangulo imbricatis ramis procumbentibus. *Linn. Fl. Lapp.* 179.

SAXIFRAGA caule repente, foliis quadrifariam imbricatis, cartilagineis ciliatis. *Hall. Hiſt.* 980.

SEDUM alpinum ericoides cœruleum. *Bauh. Pin.* 284. et purpuraſcens. *ejuſd.*

SAXIFRAGA alpina ericoides flore cœruleo. *Tourn. Inſt.* 253. *Raii Syn. p.* 353. *ed.* 3. Mountain Heath-like Sengreen, with large purple Flowers.

RADIX perennis, fibroſa, fuſca.

CAULES plurimi, procumbentes, repentes, teretes, inferne nudi, fuſci, e petris et rupibus ſæpe dependentes funiculorum inſtar.

FOLIA alterne oppoſita, circa caules floriferos imbricatim denſe collocata, ſubconnata, obovata, concava, ſubcarnoſa, ad margines ciliata, apicibus depreſſis calloſis albidis, ſurculorum magis remota.

FLORES in ſummis caulibus ſeſſiles, ſolitarii, magni, ſpecioſi, primum læte purpurei, demum cœruleſcentes.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, ciliatis, coloratis, inæqualibus, caulinis perquam ſimilibus, *fig.* 1.

COROLLA: PETALA 5, ſubrotunda, unguibus brevibus inſtructa, *fig.* 2.

NECTARIUM: ſubſtantia glanduloſa ad baſin germinis nectar copioſe fundens.

STAMINA: FILAMENTA 10, erecta, ſubulata, purpuraſcentia; ANTHERÆ ovales, compreſſæ, purpureæ; POLLEN aurantiacum, *fig.* 3.

PISTILLUM: GERMEN inferum; STYLI duo, ſubulati, erecti, longitudine ſtaminum, inferne flaveſcentes, ſuperne rubelli; STIGMATA duo capitata, villoſa, rubra, *fig.* 4.

ROOT perennial, fibrous, of a brown colour.

STALKS numerous, procumbent, creeping, round, below naked, brown, often hanging down like ſtrings from ſtones and rocks.

LEAVES alternately oppoſite, thoſe on the flowering ſtalks cloſely imbricated, uniting nearly at the baſe, inverſely ovate, concave, ſomewhat fleſhy, fringed on the edges, tops flattened, callous and whitiſh, thoſe on the young ſhoots more remotely ſituated.

FLOWERS on the tops of the ſtalks, ſeſſile, ſolitary, large, ſhewy, at firſt of a lively purple colour, finally blueiſh.

CALYX: a PERIANTHIUM of five leaves, which are ovate, edged with hairs, coloured, unequal, and very like thoſe of the ſtalk, *fig.* 1.

COROLLA: 5 roundiſh PETALS, furniſhed with ſhort claws, *fig.* 2.

NECTARY: a glandular ſubſtance at the baſe of the germen, affording much honey.

STAMINA: 10 Filaments, upright, tapering, purpliſh; ANTHERÆ oval, flattened, purple; POLLEN orange-coloured, *fig.* 3.

PISTILLUM: GERMEN beneath; STYLES two, tapering, upright, the length of the ſtamina, below yellowiſh, above bright red; STIGMATA two little villous red heads, *fig.* 4.

This ſpecies of Saxifrage, the only Britiſh one with purple flowers, is found plentifully on the ſummits of our higheſt mountains in England, Scotland, and Wales; we have obſerved it both on Ingleborough and Pennigent in Yorkſhire, Mr. LIGHTFOOT on moſt of the Scotch mountains, and Mr. LHWYD abundantly on Snowdon.

It flowers much earlier than any of the genus, empurpling and enlivening the barren rocks (from which in ſome ſituations it hangs pendent to a great length) in April and May; in our gardens near London it blows uſually in February and March; when the bloſſoms firſt expand they are of a bright purple colour, as they go off they incline to blue; this variation in their colour has induced ſome Botaniſts to make two ſpecies of it. It is ſaid to vary with white flowers; we do not know that any ſuch variety has been ſeen in this country.

The plant itſelf is very liable to vary from ſituation; when it grows expoſed, the whole plant aſſumes a more compact appearance, the ſtalks are ſhorter, the leaves more cloſely imbricated, the flowers more numerous; this is its natural, and moſt beautiful ſtate; in ſhady and more ſheltered ſituations, the ſtalks ſhoot to a greater length, the leaves are placed at greater intervals, aſſume a greener hue, and reſemble ſomewhat thoſe of wild Thyme, in ſuch ſituations few or no flowers are produced.

No mention is made of this plant by GERARD, or PARKINSON; in their time botanical reſearches had not been puſhed to the extent they have ſince been; RICHARDSON and LHWYD, in the time of RAY, were active in exploring the mountains of Yorkſhire and Wales, it was reſerved for Mr. LIGHTFOOT to penetrate further North, to viſit the untrodden heights of Caledonia, and gather it.

'Tis only within a few years that this beautiful native* has been cultivated as an ornamental plant; ſmall pots of it are now regularly brought to Covent-Garden-Market, the latter end of February and beginning of March, where they are ſold from one to two ſhillings each.

Though it be a hardy plant, and of ready growth, as moſt of the Saxifrages are, yet it will not flower in perfection, as we have found by long experience, but under certain management, which is this, about the latter end of March divide a plant, which has filled a pot the preceding year, into many ſmall pieces, taking care that each has a few fibres to it, plant about ſix of theſe in the middle of a ſmall pot, filled with a compoſition of loam and rotten leaves, or bog earth, in equal parts, water them and ſet them by in a ſhady place for about a week, then plunge them in an open border, expoſed not more than one half of the day to the ſun; in dry weather be particularly careful to water them once a day, they require no other attention, but this they will not diſpenſe with; the enſuing ſpring, each pot will be covered with a profuſion of bloom; to continue them in perfection they muſt be treated thus yearly.

Mr. MILLER recommends a ſhady ſituation for this plant, which we have ever found injurious, the ſhelter of a green-houſe quickly draws it up and ſpoils it; it is indeed one of thoſe plants which revolts at all tender treatment.

One of its leaves when magnified becomes a curious object, bearing a great reſemblance to thoſe of ſome of the Fig-Marigolds.

* Pulchræ plantæ elegantiam difficile eſt aut verbis exprimere aut penecillo. *Hall. Hiſt.*

Saxifraga oppositifolia

OPHRYS FUCIFERA. GREEN-WINGED OPHRYS.

OPHRYS. *Linn. Gen. Pl.* GYNANDRIA DIANDRIA.

Nectarium ſubtus ſubcarinatum.

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

OPHRYS *aranifera* bulbo ſubrotundo, ſcapo folioſo, nectarii labio ſubrotundo integro emarginato convexo. *Huſſ. Fl. Angl. ed.* 2. *p.* 392.

OPHRYS *inſectifera var.* 3 *Linn. Sp. Pl. ed.* 3. *p.* 1343.

ORCHIS fucum referens colore rubiginoſo. *Bauh. Pin. p.* 83. *Vaill. Par. p.* 146. *t.* 31. *f.* 15. 16. *Tourn. Inſt. t.* 247. *CC.*

ORCHIS five Teſticulus ſphegodes hirſuto flore. *J. B. II.* 767. *Raii Syn. ed.* 3. *p.* 380. Humble Bee Satyrion with green wings.

TESTICULUS vulpinus 2 ſphegodes. Humble Bee Orchis. *Ger. emac. p.* 212. *f.* 3.

ORCHIS Sphegodes five fucum referens. The greater Drone Bee flower. *Park. Th. p.* 1350. as to the fig. but not the deſcr.

RADIX bulbi duo, ſubrotundi.

ROOT two roundiſh bulbs.

CAULIS ſemipedalis, humilior elatiorve pro ratione loci, teres, lævis, inferne foliis vaginantibus veſtitus.

STALK ſix inches high, ſhorter or taller according to its place of growth, round, ſmooth, covered below with leaves embracing it.

FOLIA radicalia ſeſunciam longa, unciam fere lata, ovato-lanceolata, obtuſiuſcula, lineata, lævia, ſupra terram expanſa, caulina pauca anguſtiora et acutiora.

LEAVES next the root an inch and a half long, almoſt an inch broad, ovato-lanceolate, ſomewhat blunt, marked with impreſſed lines, ſmooth, expanding on the ground, thoſe of the ſtalk few, narrower, and more pointed.

FLORES 3—6 in ſpica rara.

FLOWERS from 3 to 6, in a thin ſpike.

COROLLA: PETALA 5, pallide viridia, *tria exteriora* majora, longitudine labelli, horum duo oppoſita, ovato-lanceolata, obtuſa, ſubincurvata, ſuprema anguſtata marginibus revolutis; *duo interiora* breviora, lanceolata, erecta, aut paululum recurvantia, apice plerumque ſubtruncata: *fig.* 1, *Labellum* ſuborbiculatum, inferne concavum, ſuperne convexum, lateribus deflexis, primo purpureo-fuſco vivide coloratum, mox flaveſcens, in medio macula literam Hebraicam ח quodammodo referente ſæpius notatum, in diverſis floribus diverſa, ut in icone exprimitur, villis denſis obſitum, preſertim ad latera, ubi plerumque prominet, maculis exceptis, quæ nudæ nitidæquæ ſunt.

COROLLA: 5 PETALS of a pale-green colour, the *three outermoſt* largeſt and the length of the labellum, of theſe the two oppoſite ones are ovato-lanceolate, obtuſe, bent ſomewhat inwardly, the uppermoſt one narrowed, with the edges rolled back, the *two innermoſt* ſhorter, lanceolate, upright or bent a little back, generally ſomewhat truncated at the tip: *fig.* 1, the *Labellum* nearly orbicular, below concave, above convex, the ſides bent down, at firſt of a bright purple brown colour, ſoon changing to a yellowiſh hue, marked in the middle with a ſpot conſiderably reſembling the Hebrew letter ח, differing however in its form in different flowers, as is expreſſed in the plate, covered thickly with ſhort hairs, eſpecially at the ſides, where it for the moſt part projects, the ſpots excepted, which are ſmooth and gloſſy.

STAMINA: FILAMENTA duo, albida; ANTHERÆ clavatæ, *fig.* 2, flaveſcentes; thecæ in quibus continentur, *fig.* 3, per totam longitudinem apertæ, marginibus membranaceis, ſuperne ſubdiaphanis, ubi color antherarum tranſparet.

STAMINA: two FILAMENTS of a whitiſh colour; ANTHERÆ club-ſhaped, *fig.* 2, yellowiſh, the caſes in which they are contained, *fig.* 3, open through their whole length, their edges membranaceous, and near the top, ſo tranſparent that the colour of the antheræ is ſeen through them.

PISTILLUM: STIGMA concavum, purpuraſcens, utrinque glandula vireſcente notatum, *fig.* 4.

PISTILLUM: STIGMA concave, purpliſh, marked on each ſide with a greeniſh gland, *fig.* 4.

The *Ophrys arachnites, Linn. Sp. Pl. ed.* 3. a variety of his *inſectifera*, comprehends to our certain knowledge three perfectly diſtinct ſpecies, viz.

1. Orchis araneam referens, *Bauh. Pin.*
2. Orchis fucum referens colore rubiginoſo, *Bauh. Pin.*
3. Orchis fucum referens major foliolis ſuperioribus candidis et purpuraſcentibus. *Bauh. Pin.*

Of theſe plants LINNÆUS appears to have had a very imperfect knowledge; and HALLER, who particularly directed his attention to the Orchideæ, ſeems either not to have known, or to have confounded them; the ſame may be ſaid of MURRAY and GMELIN, in neither of whoſe editions of LINNÆUS is our *fucifera* or *apifera* enumerated: VAILLANT in his *Botan. Pariſ.* gives a very juſt repreſentation of the flowers of the three ſpecies, all of which are natives of France, and by thoſe repreſentations may be ſaid to have firſt clearly aſcertained them; for the figures of the older authors want the neceſſary accuracy. Of the *arachnites*, an excellent print, for the time in which it was executed, is given in the *Hortus Elthamenſis*, a library of itſelf, and to which one cannot but regret that LINNÆUS has ſo few references; an accurate figure and deſcription of it is alſo given by HALLER, in his *Hiſt. Stirp. Helv.* Hitherto, this plant, common to Switzerland, and many parts of Europe, has not been diſcovered wild in this country; a plant of it in full bloom, and in great perfection

perfection at it's preſent time, June 1. 1794, is the pride of my garden at Brompton: this muſt be regarded as the true *arachnites* of LINNÆUS, ſince it is indiſputably the ſame as the one figured by VAILLANT, to which he refers, and the *Orchis araneam referens* of C. BAUHINE, to which he alſo refers; indeed as ſuch it is admitted by Profeſſor MURRAY, in the 14th edition of the *Syſtema Vegetab.* with a ſuitable ſpecific deſcription according with that of HALLER. It is evident that Mr. HUDSON, when he gave to the ſpecies here figured, the name of *aranifera* (a term ſynonymous with that of *arachnites*) and which he was the firſt to deſcribe ſpecifically in the Linnæan ſtyle (though RAY in his *Synopſis* had pointed out its ſtriking character) regarded the *arachnites* of LINNÆUS and the β variety of it as the ſame ſpecies, from his referring to two different figures in VAILLANT for his plant; this he ought not to have done, but following LINNÆUS's reference to BAUHINE, have ſelected the term *fucifera*, which we have been under the neceſſity of doing, rather than be ſubject to the confuſion ariſing from having two different plants called by ſynonymous terms.

Our plant is the Ophrys, commonly known in this country by the name of the Bee Orchis with green wings, the petals being altogether of an herbaceous colour; while in the *apifera*, already figured, three of them are pale purple; as they differ in colour, ſo do they alſo very materially in ſhape, and as theſe differences are invariable, any other mark of diſcrimination is almoſt ſuperfluous, yet we may obſerve, that they flower at two very different periods, the *fucifera* has ſometimes been found in mild ſeaſons in bloom as early as March, in late ones in May, while the *apifera* rarely flowers till the end of June or beginning of July.

Some authors have fancied that the flowers of this plant bore a reſemblance to a bee or a ſpider, it muſt be confeſſed that much of this ſimilitude depends on the imagination; others have diſcovered a more real likeneſs to a ſmall bird in each flower: this appearance will be obvious to our readers on inſpecting the plate. When a triſling likeneſs of this ſort has occurred in plants, or animals, the old authors generally improved on it; even TOURNEFORT's figure of this part of our plant is ſomewhat *outré* in this reſpect.

In this ſpecies the nectary, which at firſt is of a bright and very rich brown colour, ſoon changes to a faded yellow green; when the flowering is over, the petals incline forward, and cloſe over the nectary.

Though the *Ophr. apifera* is found abundantly near London, this ſpecies has not yet been obſerved equally near; we have ſeen it growing, though very ſparingly, in the chalk pits near Leatherhead; in the neighbourhood of Bury, in Suffolk; alſo, about Cambridge it is found ſome years in great abundance: from the former place we have been favoured with roots of it by Sir TH. G. CULLUM, Bart. and from the latter by Profeſſor MARTYN, and the Rev. J. DAVIES, of Trinity-College: it has been obſerved alſo in various other parts of the kingdom.

Such as delight in the culture of flowers will be pleaſed to find, that with a little attention and management they may ſucceed in making this plant grow and flower with them more freely than many of the tribe; we recommend to them the following method, which we have found ſucceſsful: take up the roots carefully when in flower, bare them no more than is neceſſary to remove every other kind of root about them, fill a large-ſized garden pot with three parts choice loam moderately ſtiff, and one part chalk mixed well together and paſſed through a ſieve ſomewhat finer than a common cinder ſieve, in this mixture place your roots at about the depth of two inches, and three inches apart, water them occaſionally during ſummer if the weather prove dry, at the approach of winter place your pot in a frame under a glaſs to keep them from wet and froſt, which combined deſtroy the beauty of the foliage, if not the plant itſelf; in the autumn, before any of the others make their appearance, you will perceive the leaves of this ſpecies emerge, much ſooner indeed than might be expected.

ORCHIS FUSCA. GREAT ORCHIS.

ORCHIS. *Linn. Gen. Pl.* GYNANDRIA DIANDRIA.

NECTARIUM cornu referens pone florem. *Cor.* ringens.

Raii Syn. Gen. 26. HERBÆ BULBOSIS AFFINES.

ORCHIS *fuſca* bulbis indiviſis, nectarii labio quadrifido: laciniis oblongis, cornu brevi, petalis confluentibus. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 809. *Jacq. Fl. Auſtr. v.* 4. *p.* 4. *t.* 307.

ORCHIS *militaris Linn. Sp. Pl. ed.* 3. *p.* 1334. *var.* β.

ORCHIS radicibus ſubrotundis; ſpica longa; labello quadrifido, brachiolis anguſtis, cruſculis latis ſerratis. *Hall. Hiſt. Helv. n.* 1276. *t.* 31.

ORCHIS magna, latis foliis, galea fuſca ſeu nigricante. *J. B.* II. *p.* 759. *Raii Syn. ed.* 3. *p.* 378. *t.* 19. *f.* 2.

ORCHIS militaris major. *Tourn. Inſt. R. Herb.* 432. *Vaill. par. t.* 31. *f.* 27, 28.

RADIX: Bulbi duo, oblongi, magni.

FOLIA caulina inferiora ovato-oblonga, obtuſiuſcula, a duabus ad tres uncias lata, glabra, lineata, in quibuſdam ſpeciminibus tranſverſe rugoſa, læte virentia, ſuperiora anguſtiora, caulem obvolventia.

CAULIS pedalis, ad bipedalem, et ultra, erectus, teres, lævis, inferne viridis, ſuperne purpureus.

FLORES numeroſi, in ſpica longa, ovato-cylindracea, imbricatim denſe collocati.

BRACTEÆ perbreves, vix longitudine calcaris nectarii, ovato-acuminatæ.

COROLLA: PETALA 5 in galeam conniventia, tria exteriora ovata, acuta, obſolete 3-nervia, concava, punctis exfuſco-purpureis confluentibus notata, duo interiora multo anguſtiora, oblonga, verſus apicem paululum dilatata, pallidiora, punctis purpureis etiam notata, *fig.* 1.

NECTARIUM: *Calcar* obtuſum, ſubcompreſſum, obſolete bifidum, medium germinis vix attingens, albeſcens: *Labellum* amplum, latum, punctis purpureis prominulis exaſperatum, quæ uti Hallerus recte monet brevium pilorum faſciculi ſunt, in floribus nuper apertis ſaturatius purpureum, præſertim ad oras, quadrifidum, laciniæ ſuperiores ſublineares, divergentes, inferiores triplo latiores, divergentes, apicibus ſubtruncatis, eroſo-denticulatis, mucrone plerumque intermedio.

STAMINA: *Thecæ* ſtaminum purpureæ, *fig.* 2. FILAMENTA flaveſcentia, ANTHERÆ ſubclavatæ, albidæ, *fig.* 3.

GERMEN teretiuſculum, tortuoſum, glabrum, ex fuſco viridique varium.

ROOT two, oblong, large Bulbs.

LEAVES: thoſe on the lower part of the ſtalk ovato-oblong, a little blunt, from two to three inches broad, gloſſy, ſcored, in ſome ſpecimens tranverſely wrinkled, of a lively green colour, the uppermoſt leaves narrower and ſurrounding the ſtalk.

STALK a foot, two feet, and ſometimes more in height, upright, round, ſmooth, green below, purple above.

FLOWERS numerous, placed cloſe together, one over the other, in a long ſpike, betwixt ovate and cylindrical.

BRACTEÆ very ſhort, ſcarcely the length of the ſpur of the nectary, ovato-acuminate.

COROLLA: 5 PETALS cloſing and forming a helmet, the three outermoſt ovate, pointed, faintly three ribb'd, concave, marked with ſpots of a browniſh purple colour running together, the two innermoſt ones much narroweſt, oblong, a little dilated towards the top, paler, marked alſo with purple ſpots, *fig.* 1.

NECTARY: the *Spur* blunt, ſomewhat flattened, ſlightly bifid, ſcarcely reaching to the middle of the germen: *Labellum* large, broad, rough, with prominent purple dots, which, as Haller juſtly obſerves, are little tufts of ſhort hairs, in flowers lately opened of a deeper purple colour, eſpecially on the edges, divided into four ſegments, the two uppermoſt of which are nearly linear and diverging, the two lowermoſt thrice as broad, diverging, the tips ſomewhat truncated, irregularly and finely notched, with a ſhort point for the moſt part between the two.

STAMINA: *Caſes* of the ſtamina purple, *fig.* 2. FILAMENTS yellowiſh, ANTHERÆ ſomewhat club-ſhaped, whitiſh, *fig.* 3.

GERMEN roundiſh, twiſted, ſmooth, variegated with green and brown.

On chalky banks abounding with Milkwort and Juniper, near woods, and in the woods themſelves, in many parts of Kent, eſpecially about Rocheſter, we have had no ſmall pleaſure in obſerving this plant grow in great abundance.

In expoſed aſpects its uſual height is about nine inches, in woods and copſes where it is more ſheltered, and where the ſoil is richer, it will acquire the height of two feet or more; ſuch ſpecimens in beauty and grandeur far ſurpaſs every Britiſh Orchis; its flowers vary exceedingly in colour, ſome being of a light, others of a deep purple colour, now and then one wholly white occurs; the lip of the nectary, an intereſting object for the microſcope, varies alſo in breadth; both root and flowers ſend forth a ſtrong ſmell, ſomewhat like but not ſo pleaſant as Anthoxanthum.

It flowers early in May, and in forward ſeaſons at the cloſe of April, at the ſame time as the early ſpotted Orchis, Cowſlip, and Harebell.

Our plant is undoubtedly the *Orchis fuſca* of JACQUIN, whoſe name we have adopted, as alſo the one we have referred to in HALLER, by whom it is repreſented in a very luxuriant ſtate; LINNÆUS regards it as a variety of his *militaris*; Prof. MURRAY, in the 14th ed. of his *Syſt. Vegetab.* follows RAY, HALLER, JACQUIN, VAILLANT, and others, in making it a ſpecies.

The ſame culture which we have recommended for the *Ophrys fucifera* is applicable to this ſpecies.

Orchis fusca

Veronica triphyllos

VERONICA TRIPHYLLOS. TRIFID SPEEDWELL.

VERONICA. *Linn. Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. Limbo 4-partito, lacinia infima anguſtiore. *Capſ.* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *triphyllos* floribus ſolitariis, foliis digitato partitis, pedunculis calyce longioribus. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 60. *Scop. Fl. Carn. ed.* 2. *n.* 25. *Hudſ. Fl. Angl. ed.* 2. *p.* 7. *triphylla. Flor. Suec. ed.* 2. *p.* 7.

VERONICA foliis ovatis, tripartitis, et quinquepartitis, floribus longe petiolatis. *Hall. Hiſt.* 551.

VERONICA floſculis ſingularibus, foliis laciniatis, erecta. *Raii Syn. ed.* 3. *p.* 280. Upright Speedwell with divided leaves.

ALSINE triphyllos cærulea. *Baub. Pin.* 250.

ALSINE parva recta, folio Alſines hederaceæ Rutæ modo diviſo. *Lob. icon.* 464.

ALSINE recta. Right Chickweede. *Ger. Herb. p.* 489. *emac. p.* 612. *f.* 5.

ALSINE recta triphyllos, five laciniata. *Park. Th. p.* 760. Upright Chickweede with jagged leaves.

ALSINE recta flore cæruleo. Upright blew Chickweede. *Park. Th. p.* 1260. *f.* 6.

ALSINE folio profunde ſecto, flore purpureo ſeu violaceo. *I. B.* 3. 367.

VERONICA folio Rutæ. *Rivin. t.* 96.

RADIX annua, fibroſa.

CAULES plures, ſubpalmares, erectiuſculi, teretes, ſuperne viſcidi, pallide virides, aut ſubrubentes, pendente floreſcentia ſubnutantes.

FOLIA patentia, remotiuſcula, alterna et oppoſita, craſſiuſcula, utrinque piloſa, ſubtus ſæpe rubentia, inferiora cordato-ovata, breviſſime petiolata, ſuperiora ſeſſilia, digitato-quinquepartita, et tripartita, laciniis cuneiformibus, intermedia maxima.

FLORES axillares, ſolitarii, ſaturate et ſplendide cærulei; *Pedunculi* foliis breviores.

CALYX: PERIANTHIUM monophyllum, perſiſtens, quadripartitum, laciniis obovatis, foliis ſupremis plantæ ſimilibus, *fig.* 1.

COROLLA monopetala, rotata, calyce minor; *Tubus* breviſſimus, albus; *Limbus* quadripartitus, planus, laciniis ovatis, infima anguſtiore, huic oppoſita latiore, *fig.* 2.

STAMINA: FILAMENTA duo, inferne anguſtiora, alba; ANTHERÆ oblongæ, cæruleæ, *fig.* 3.

PISTILLUM: GERMEN compreſſum; STYLUS filiformis, longitudine ſtaminum; STIGMA ſimplex, albidum, *fig.* 4.

PERICARPIUM: CAPSULA magna, obcordata.

SEMINA plurima, e fuſco nigricantia, hinc convexa, gibba, rugoſa, illinc concava.

ROOT annual, fibrous.

STALKS numerous, about a hand's breadth high, nearly upright, round, on the upper part viſcid, of a pale green or reddiſh colour, drooping a little during the flowering period.

LEAVES ſpreading, rather remote, alternate and oppoſite, thickiſh, hairy on both ſides, often reddiſh on the under ſide, the lowermoſt heart-ſhaped ovate, ſtanding on very ſhort footſtalks, the upper ones ſeſſile, fingered, or divided deeply into five and three parts, the ſegments wedge-ſhaped, the middle one very large.

FLOWERS placed ſingly in the boſoms of the leaves, of a deep and bright blue colour; *Flower-ſtalks* ſhorter than the leaves.

CALYX: a PERIANTHIUM of one leaf, continuing, deeply divided into four ſegments, which are obovate, and like the uppermoſt leaves of the plant, *fig.* 1.

COROLLA monopetalous, wheel-ſhaped, ſmaller than the calyx; *Tube* very ſhort and white; *Limb* deeply divided into four ſegments, flat, ſegments ovate, lowermoſt one narrower, uppermoſt one broader than the reſt, *fig.* 2.

STAMINA: two FILAMENTS, narroweſt below, white; ANTHERÆ oblong, blue, *fig.* 3.

PISTILLUM: GERMEN flattened; STYLE filiform, the length of the ſtamina; STIGMA ſimple, whitiſh, *fig.* 4.

SEED-VESSEL: a large CAPSULE, inverſely heart-ſhaped.

SEEDS numerous, of a blackiſh brown colour, convex, gibbous, and wrinkled on one ſide, hollow on the other.

The *Veronica triphyllos*, a plant common to moſt parts of Europe, and chiefly found in corn-fields, where the ſoil is light, is of very partial growth in this country, and found principally in the counties of Norfolk* and Suffolk; we have received ſpecimens of it from Sir THOMAS FRANKLAND, gathered by him in Yorkſhire.

It flowers very early in the ſpring, in March, and April, and ripens its ſeeds in June, from thoſe ſpontaneouſly ſcattered, young plants come up readily in autumn; in favourable ſoils this ſpecies, like the *hederifolia* and *agreſtis*, ſeems much diſpoſed to become a weed; but, like them, is too trifling to be injurious.

C. BAUHINE mentions two varieties of this Veronica, one with larger and thicker leaves, the other with ſmaller ones; theſe ſcarcely deſerve the name of varieties: HALLER obſerves, that ſix inches is the utmoſt height of the plant, we have ſeen it much taller; the ſummits of the flowering branches for the moſt part bend ſomewhat downwards, a peculiarity of the plant which we have not found noticed by authors.

This ſpecies is too diſtinct to be miſtaken for any other Engliſh one, its divided leaves, the deep rich blue colour of its flowers, and the largeneſs of its ſeed-veſſels obviouſly diſtinguiſh it.

Triphyllos, a name given to it by ſome of the old Botaniſts, is not always applicable, the leaves in young plants particularly, being often divided into more than three ſegments.

* At Rowton in Norfolk, betwixt the town and the highway, twelve miles before you come to Norwich, at Mowſe in Suffolk, between the two windmills and the warren-lodge; in the gravel-pits, two miles beyond Barton Mills, on the ridge of the hill where a ſmall cart-way croſſeth the road to Lynn; and in the grals thereabouts, plentifully. TH. WILLISEL. *Ray's Syn. ed.* 3. *p.* 280.

MELITTIS MELISSOPHYLLUM. BASTARD-BALM.

MELITTIS. *Linn. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Calyx tubo corollæ amplior. *Corollæ* labium ſuperius planum; labium inferius crenatum. *Antheræ* uciatæ.

Raii Syn. Gen. 24. SUFFRUTICES ET HERBÆ TERTICILLATÆ.

MELITTIS *Meliſſophyllum. Linn. Sp. Pl. ed.* 3. *p.* 832. *Syſ. Vegetab. ed.* 14. *Murr. p.* 544. *Scop. Carn. ed.* 2. *p.* 421. *Hudſ. Flogl. ed.* 2. *p.* 264. Common Baſtard-Balm. *Jacq. Fl. Auſtr. v.* 1. *t.* 26.

MELISSOPHYLLUM. *Hall. Hiſt. n.* 244.

LAMIUM montanum Meliſſæ folio. *Bauh. Pin. p.* 231.

MELISSA Fuchſii. *Hort. Eyſt. vern. Ord.* 6. *fol.* 7. *f.* 3. re albo et flore purpureo. Baſtard Baume with white and with purple flowers. *r. emac. p.* 690. *f.* 3. 3. Baulm-leav'd Archangel, Baſtard-Baulm. *Raii Syn. ed.* 3. 242.

MELISSOPHYLLUM Fuchſii. Unpleaſant Baulme. *Park'h. p.* 41. *f.* 4.

LAMIUM pannonicum verſicolore flore. *Cluſ. rar. pl. p.* xxij.

RADIX perennis, fibroſa.
CAULES ſeſquipedales et ultra, erecti, tetragoni, hirſuti, ad baſin ramis paucis inſtructi.

FOLIA oppoſita, petiolata, ovata, ſubacuta, inæqualiter et obtuſiuſcule ſerrata, villoſiuſcula, rugoſa, petioli canaliculati, hirſuti, baſi connati.
FLORES magni, ſpecioſi, odorati, pedunculati, verticillati, ſubſecundi, verticillis dimidiatis, ſubſexfloris.
PEDUNCULI teretes, hirſutuli, longitudine petiolorum.
CALYX: PERIANTHIUM monophyllum, inflato-ventricoſum, bilabiatum, venoſum, glabrum, venis hirſutulis, diviſuris labiorum perquam inconſtantibus, *fig.* 1.

COROLLA monopetala, ringens, villoſula, alba; *Tubus* calyce longior, multoque anguſtior, *Labium* ſuperius erectum, ſubrotundum, integrum, inferius trifidum, laciniis obtuſis, intermedia majori, ſubrotundo, purpureo, margine crenulato, albo, *fig.* 2.
STAMINA: FILAMENTA 4, alba, villoſa, corolla breviora; ANTHERÆ flaveſcentes, *fig.* 3.
PISTILLUM: GERMEN obtuſum, quadrifidum, villoſum; STYLUS filiformis, longitudine ſtaminum; STIGMA, bifidum, acutum, *fig.* 4.
SEMINA 4 in fundo calycis, nigricantia, *fig.* 5.

ROOT perenial, fibrous.
STALKS a ſt and a half high, or more, upright, ſqua ſtrongly hair'd, furniſhed at the baſe with few branches.
LEAVES oppſite, ſtanding on footſtalks, ovate, ſomihat pointed, unevenly and bluntly ſerrad, ſlightly villous, wrinkled, footſtalks conve above, hirſute, united at the baſe.
FLOWERS ge, ſhewy, odoriferous, ſtanding on foouks, growing chiefly to one ſide, in half whs about ſix flowers together.
FLOWER-STALKS round, ſomewhat hairy, the leng of the leaf-ſtalks.
CALYX: a RIANTHIUM of one leaf, ſomewhat inflad and bellying out, two-lip'd, veiny, ſmah, except the veins which are ſomewhs hairy, the diviſions of the lips altoge themconſtant, *fig.* 1.
COROLLA nopetalous, ringent, ſlightly villous, whi; *Tube* longer than the calyx and much narower, upper lip erect, roundiſh, entire, lowr lip triid, ſegments obtuſe, the middle on largeſt, purple, the margin finely noched, and white, *fig.* 2.
STAMINA four FILAMENTS, white, villous, ſhorter tha the corolla; ANTHERÆ yellowiſh, *fig.* 3.
PISTILLUI: GERMEN obtuſe, quadrifid, villous; STLE filiform, the length of the ſtamina; STGMA bifid and pointed, *fig.* 4.
SEEDS fou in the bottom of the calyx, of a blackiſh colur, *fig.* 5.

The *Melitis Meliſſophyllum*, a plant common to many parts of Europe, has hitherto been diſcovered in the more weſtern parts of this kingdom only, particularly Pembrokeſhire, Devonſhire, and Hampſhire, in ſome of which counties it grows in great abundance; Dr. WAVELL has obſerved it in various places about Barnſtaple: in his company, I gathered it at the foot of a hedge by the pad ſide near the hoſpitable manſion of —— CHICHESTER, Eſq. of Hall, about two miles from that town. It is moſt commonly found in woods, or ſituations ſomewhat ſhady.

It was not probable that a plant of ſuch ſingular beauty ſhould beſuffered to bloſſom in its native woods, unſeen: accordingly, we now find it in moſt of our nurſeries, and gardens of the curious, yet not ſo generally as it merits. Moſt authors deſcribe the *Melitis* as having an unpleaſant ſmell; the freſh herb when bruiſed partakes of the agreeable ſcent of Balm, and the diſagreeable ſmell of ſtinking Horehound; dried, it loſes the unpleaſant part, and becomes deliguifully fragrant; the flowers when they firſt open have appeared to us to be ſweetly odoriferous, we ſay appeared to us, becauſe as they are ot deſcribed as ſuch, others may not have found them ſo, for we have obſerved an unaccountable variation i the perceptibility of ſmells in different perſons, we know ſeveral who can diſcover no ſcent in the flowers of the Perſian Iris; the general acuteneſs of whoſe olfactories cannot be called in queſtion.

CLUSIUS obſerved this plant in its wild ſtate with white flowes; he mentions alſo a variety of it in all reſpects ſmaller; whether this be a variety differing as we have obſerved the *Melitis* [illegible] to do, or whether it be a ſpecies, we muſt leave to the determination of others: in the apothecaries garden at Chelſea, we have ſeen a Melitis anſwering to CLUSIUS's deſcription, the flowers of which were not more than half the ſize of the Devonſhire one, of a pale red colour, correſponding more with JACQUIN's figure, the blooms of which are not ſo large as thoſe of our plant.

From a gland which encircles the baſe of the germen there is much honey ſecreted; hence the plant accords with its name *Melitis*, hence it becomes the reſort of bees.

The cruciform appearance of the Anthere ought not to form any part of the generic character, being, as Prof. JACQUIN has obſerved, common to many of the didynamous plants.

There is no difficulty attends the cultivation of this charming hardy perennial; planted in almoſt any ſoil, provided it be moderately moiſt and ſomewhat ſhady, it will flouriſh; it increaſes by roots and ſeeds, and may be readily propagated by parting the one or ſowing the other in autumn.

. Melittis
. Melissophyllum

3.
2.
Glaucium cornutatum

GLAUCIUM CORNICULATUM. RED HORNED-POPPY.

CHELIDONIUM. *Linn. Gen. Pl.* POLYANDRIA MONOGYNIA.

Cor. 4-petala. *Cal.* 2-phyllus. *Siliqua* 1-locularis, linearis.

Raii Syn. Gen. 22. Herbæ vaſculiferæ flore tetrapetalo anomalæ.

CHELIDONIUM *corniculatum* pedunculis uniſloris, foliis ſeſſilibus pinnatifidis, caule hiſpido, *Linn. Syſt. Veg. Ed.* 14. *Mant. p.* 189. *Sp. Pl. Ed.* 3. *p.* 721. *Huds. Fl. Ang. Ed.* 2. *p.* 229.

GLAUCIUM hirſutum flore phœniceo. *Tourn. Inſt.* 254.

PAPAVER corniculatum phœniceum hirſutum. *Baub. Pin.* 171.

PAPAVER corniculatum rubrum. *Dod. Pempt.* 449.

PAPAVER cornutum phœniceo flore. *Cluſ. Hiſt.* 2. *p.* xci.

PAPAVER cornutum flore rubro. *Ger. Herb. p.* 294. *f.* 2. *emac.* 367. *f.* 2. Red-horned Poppey. alſo *fig.* 3, in *Ger. Herb.*

RADIX annua, fuſiformis, parum fibroſa, flaveſcens.

CAULIS pedalis ad ſeſquipedalem, erectiuſculus, teres, leviter ſulcatus, pilis longis diſtantibus hiſpidus, pallide virens, ramoſus, rami cauli ſimiles, divaricato-patuli.

FOLIA candicantia, radicalia in orbem poſita, erectiuſcula, petiolata, cætera ſeſſilia, ſemiamplexantia, alterna, remota, ſinuato-pinnatifida, utrinque pilis uti caulis hiſpida; lacinæ in radicalibus alternæ; extimæ confluentes, in ſuperioribus caulinis oppoſitæ, dentatæ, dentibus obtuſiuſculis, mucronatis, nunc remotis, nunc approximatis, ad apices plerumque ternis.

FLORES ſolitarii, magni, rubro-crocei, erecti, caduci.

PEDUNCULI terminales, foliis oppoſiti, breves, ad apices dilatati, cauli ſimiles.

CALYX: PERIANTHIUM pedunculo brevius, diphyllum, hirſutiſſimum, foliolis ovato-oblongis, concavis, caducis.

COROLLA: PETALA 4, ſubrotunda, inæqualia, baſi anguſtiora, plana, margine eroſo-crenata, ad baſin macula oblonga nigra notata, *fig.* 1.

STAMINA: FILAMENTA 15 circiter, planiuſcula, corolla breviora: ANTHERÆ oblongæ, obtuſæ, compreſſæ, erectæ, didymæ, pallide aurantiacæ, *fig.* 2.

PISTILLUM: GERMEN cylindraceum, ſericeo-tomentoſum, longitudine ſtaminum; STYLUS nullus; STIGMA capitatum, craſſum, bifidum, viride, *fig.* 3.

PERICARPIUM: SILIQUA cylindracea, ſtricta, ſubcompreſſa, uncias circiter 8 longa, pilis appreſſis ſcabriuſcula, ſtigmate bilabiato terminata, bivalvis.

SEMINA plurima, nigricantia, ſubreniformia, pulchre reticulata, diſſepimento ſpongioſo nidulantia.

ROOT annual, ſpindle-ſhaped, ſlightly fibrous, yellowiſh.

STALK a foot or a foot and a half in height, ſomewhat upright, round, ſlightly grooved, covered with long diſtant hairs, of a pale green colour, branched, branches like the ſtalk, ſpreading widely.

LEAVES whitiſh, thoſe next the root placed circularly, ſomewhat upright, ſtanding on foot-ſtalks, the reſt ſeſſile, half embracing the ſtalk, alternate, remote, ſinuated and pinnatifid, covered on both ſides with hairs as on the ſtalk, the ſegments in the root-leaves alternate, the outermoſt ones confluent, in the upper ſtalk leaves oppoſite, toothed, teeth ſomewhat obtuſe, terminating in a ſhort point, ſometimes remote, ſometimes near each other, the tops having uſually three.

FLOWERS growing ſingly, large, bright red, inclining to orange, upright, quickly falling.

FLOWER-STALKS terminal, oppoſite the leaves, ſhort, dilated at top, like the ſtalk.

CALYX: a PERIANTHIUM ſhorter than the flower-ſtalk, two leaved, very hairy, leaves ovato-oblong, quickly falling.

COROLLA: 4 PETALS, roundiſh, unequal in ſize, narrower at the baſe, the edge notched or knawed, the baſe marked with an oblong, black ſpot, *fig.* 1.

STAMINA: about fifteen FILAMENTS, a little flattened, ſhorter than the corolla; ANTHERÆ oblong, obtuſe, flattened, erect, double, of a pale orange colour, *fig.* 2.

PISTILLUM: GERMEN cylindrical, covered with a ſilky down, length of the ſtamina; STYLE none; STIGMA forming a head, thick, bifid, and green, *fig.* 3.

SEED-VESSEL: a cylindrical POD, ſtraight, ſomewhat flattened, about 8 inches long, roughiſh, with hairs preſſed to it, terminated by the two-lip'd ſtigma, having two valves.

SEEDS numerous, blackiſh, ſomewhat kidney-ſhaped, beautifully reticulated, neſtling in the ſpongy receptacle.

Moſt of the old Botaniſts regarded the *Horned-Poppy* as a *Papaver:* TOURNEFORT made it a diſtinct genus by the name of *Glaucium:* LINNÆUS united it with the *Chelidonium,* with which, in our humble opinion, it has leſs affinity than with Papaver; why he ſhould not have followed TOURNEFORT in this inſtance, we ſee no good reaſon; ſurely the ſtructure of the ſeed-veſſel juſtifies the great founder of genera, in ſeparating it from the other two; ſo have thought the moſt celebrated ſyſtematic Botaniſts of modern times; in particular, HALLER, ADANSON, JUSSIEU, and SCOPOLI; the latter obſerves, that if the fruit is not to be attended to in forming the generic character, neither ſhould the Poppy be ſeparated from the Celandine.

This ornamental ſpecies, diſtinguiſhed by the colour of its flowers, its general roughneſs, and place of growth, and ſince RAY's time diſcovered by Mr. STILLINGFLEET in the ſandy corn-fields of ſome parts of Norfolk, is a well-known european plant, growing wild in corn-fields, by road ſides, in Spain, France, and Germany; it flowers in June and July, and ripens its ſeed in Auguſt. CLUSIUS obſerves, that as the plant grows old it becomes ſmoother, and a ſmooth variety of it is mentioned by C. BAUHINE.

If this plant be once introduced to a garden, in which the ſoil is light and the ſituation dry, it will come up yearly from ſeeds ſpontaneouſly ſcattered.

CERASTIUM PUMILUM. DWARF CERASTIUM.

CERASTIUM. *Linn. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* 2-fida. *Caps.* 1-locularis, apice dehiscens.

Rati Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *pumilum* floribus pentandris, petalis bifidis longitudine calycis, capsula calyce duplo longiore.

To the lynceau eye of Mr. DICKSON we are indebted for the discovery of this species of Ceraſtium, ſo very nearly related to the *ſemidecandrum*, that if the two plants had not been ſeen wild on the ſame bank, they might long have been regarded as one and the ſame ſpecies: having raiſed it from ſeeds, obſerved it in all its ſtates, and compared it, as it has proceeded in its growth, with the *Ceraſtium ſemidecandrum*, we do not heſitate to publiſh it as a ſpecies perfectly diſtinct. For want of a more appropriate name, we have aſſigned it that of *pumilum*.

It agrees with the *Ceraſtium ſemidecandrum* in being about the ſame ſize, uſually a little ſmaller, having nearly the ſame habit, the ſame number of ſtamina, and in being alſo an annual; but differs from it in the following particulars.

The whole plant, but more eſpecially the ſtalks and leaves, are more evidently hairy, being indeed perfectly hirſute, nearly as much ſo as in the *vulgatum*; the flowers are conſiderably larger, the petals being nearly twice the ſize, fully as long, or rather longer than the calyx, of courſe more ſhewy, more conſpicuous alſo from their ſuperior whiteneſs, regularly bifid or divided down one third, ſo that they greatly reſemble thoſe of the *vulgatum*, *viſcoſum*, and moſt others of the ſame genus; the ſeed-veſſels are much longer, and more tapering, for the moſt part twice the length of the calyx, but not always ſo; the character moſt to be depended on conſiſts in the form, length, and diviſion of the petals; its ſuperior hairineſs is alſo a good prima facie character; the hairs on the branches, it is to be obſerved, are equally viſcous as in the *ſemidecandrum*; the ſeeds in the *pumilum* are larger, of a darker brown colour, and rougher.

Mr. DICKSON found this ſpecies, which may perhaps be more common than we are aware, on dry banks near Croydon.

It begins to flower as early as February and March, rather ſooner than the *ſemidecandrum*, and ripens its ſeeds in May.

Slugs and ſnails are ſo extremely fond of the plant, that it is with great difficulty kept where they abound.

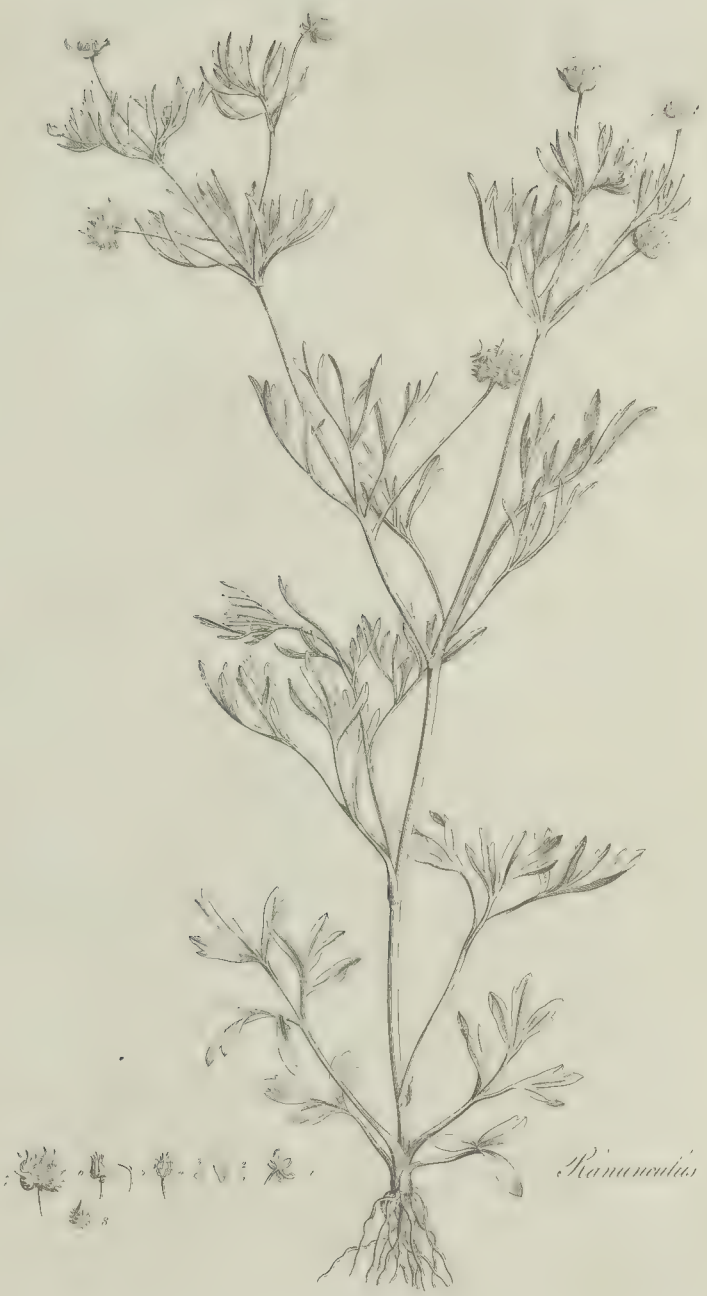
Partes Fructificationis.

Fig. 1. Calycis foliolum auct.
2. Petalum.
3. Stamina cum piſtillo.
4. Piſtillum.
5. Capſula magnit. nat.
6. Semen magnit. nat.
7. Semen auct.

Parts of the Fructification.

Fig. 1. One of the leaves of the Calyx magnified.
2. A Petal.
3. The Stamina with the Piſtillum.
4. The Piſtillum.
5. A Capſule of its natural ſize.
6. A Seed of its natural ſize.
7. The ſame magnified.

Cerastium pumilum



Ranunculus arvensis

RANUNCULUS ARVENSIS. CORN CROWFOOT.

RANUNCULUS. *Linn. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* 5 intra ungues poro mellifero. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *arvenſis* ſeminibus aculeatis, foliis ſuperioribus decompoſitis linearibus. *Linn. Syſt. Veget. ed.* 14. *Murr. p.* 518. *Fl. Suec. ed.* 2. *p.* 197. *Sp. Pl. ed.* 3. *v.* 1. *p.* 780. *Hudſ. Fl. Angl. ed.* 2. *p.* 242. *Lightf. Scot. v.* 1. *p.* 294. *Scop. Carn. v.* 1. *p.* 400. *ed.* 2.

RANUNCULUS ſeminibus aculeatis, foliis tripartitis, lobis longe petiolatis, bi et tripartis, acute inciſis. *Hall. Hiſt. n.* 1176.

RANUNCULUS arvenſis echinatus. *Bauh. Pin. p.* 179.

RANUNCULUS arvorum. *Park. Th.* 328. *fig.* 4. *Crowfoote* of the ploughed fields. *Raii Syn. ed.* 3. *p.* 248. Corn Crowfoot.

RANUNCULUS arvorum. Crowfoote of the fallowed field. *Ger. Herb. p.* 805. *emac. p.* 951. *f.* 3.

RADIX annua, ſimplex, fibroſa.

CAULIS erectus, pedalis et ultra, teretiuſculus, hinc ſubcompreſſus, inferne lævis, ſuperne hirſutulus, ramoſiſſimus, ramis ante floreſcentiam ſubnutantibus.

FOLIA pleraque alterna, ſuperiora quædam oppoſita, ſubpetiolata, vaginantia, tripartita, laciniis trifidis, patentibus, lacinulis lanceolato-linearibus, bi-trifidis, acutiuſculis, baſi anguſtatis; radicalia petiolata, laciniis latioribus.

FLORES flavi, minores.

PEDUNCULI foliis oppoſiti, iis paulo longiores, patulo-erecti, teretes, pubeſcentes, ſolitarii, uniflori.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, luteſcentibus, baſi albidis, deciduis, *fig.* 1.

COROLLA: PETALA 5, obovata, intus nitida, extus venoſa, unguibus parvis, *fig.* 2.

NECTARIUM fovea in ſingulo petalo ſupra unguem, ſquamula emarginata clauſa, *fig.* 3.

STAMINA: FILAMENTA circiter 16, corolla dimidio breviora; ANTHERÆ erectæ, oblongæ, obtuſæ, didymæ, petalis concolores, *fig.* 4, 5.

PISTILLUM: GERMINA numeroſa, in capitulum collecta; STIGMATA recurva, *fig.* 6.

SEMINA ſex ad octo, echinata, *fig.* 7.

ROOT annual, ſimple, and fibrous.

STALK upright, a foot or more in height, roundiſh, flattened a little on one ſide, ſmooth below, ſlightly hirſute above, very much branched, branches nodding ſomewhat before flowering.

LEAVES moſtly alternate, ſome of the upper ones oppoſite, ſhort footſtalk'd, ſheathing, tripartite, the ſegments trifid, ſpreading, the ſmaller diviſions lanceolato-linear, bifid or trifid, ſomewhat pointed and narrowed at the baſe; root leaves ſtanding on long footſtalks, ſegments broader.

FLOWERS yellow, rather ſmall than large.

FLOWER-STALKS oppoſite to and ſomewhat longer than the leaves, betwixt upright and ſpreading, round, downy, ſingle and one-flowered.

CALYX: a PERIANTHIUM of five ſmall ovate leaves, concave, yelloviſh, whitiſh at the baſe, and deciduous, *fig.* 1.

COROLLA: 5 PETALS, inverſely ovate, gloſſy within, veiny without, claws ſmall, *fig.* 2.

NECTARY: a ſmall depreſſion in each petal above the claw, covered by a ſmall emarginate ſcale, *fig.* 3.

STAMINA: about 16 FILAMENTS half the length of the corolla; ANTHERÆ upright, oblong, obtuſe, double, the colour of the petal, *fig.* 4, 5.

PISTILLUM: GERMINA numerous, forming a ſmall head; STIGMATA bent back, *fig.* 6.

SEEDS about ſix or eight, prickly, *fig.* 7.

Of the genus Ranunculus there are ſeveral ſpecies which have prickly ſeeds, but no engliſh one in which they are ſo conſpicuouſly ſo as in the preſent; what a difference in ſize and form betwixt theſe and thoſe of the *Ranunculus ſceleratus*, plants evidently of the ſame genus!

The Ranunculus arvenſis is a plant common to the corn-fields of moſt parts of Europe, but grows more abundantly in ſome ſoils than others; it flowers in May and June, and ripens its ſeeds in June and July. As theſe readily vegetate where they are ſpontaneouſly ſcattered, this ſpecies adds to the liſt of the weeds of our corn-fields, but not of the moſt formidable kind.

TRIFOLIUM OCHROLEUCUM. YELLOW CLOVER.

TRIFOLIUM. *Linn. Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Capſula* vel *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ochroleucum* ſpicis villoſis, caule erecto pubeſcente, foliolis infimis obcordatis. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 1143. *Jacq. Fl. Auſtr. v.* 1. *p.* 26. *t.* 40.

TRIFOLIUM *ochroleucum* ſpicis villoſis globoſis, corollis monopetalis, calycum infimo dente longiſſimo recto, caule ſubdeclinato, foliiſque villoſis infimis obcordatis. *Hudſ. Fl. Angl. ed.* 2. *p.* 325.

TRIFOLIUM caule erecto, foliis hirſutis, ſupremis conjugatis, ſpicis oblongis. *Hall. Hiſt.* 378.

TRIFOLIUM pratenſe hirſutum majus, flore albo-ſulphureo ſeu ὠχροληύκω. The great white or yellowiſh Meadow-Treſoil.

TRIFOLIUM montanum majus flore albo-ſulphureo. *Merr. Pin.*

RADIX perennis.

CAULES plures, pedales, ſeſquipedales, erecti, ramoſi, teretes, hirſuti, ſæpe purpuraſcentes.

FOLIA utrinque hirſuta, mollia, integerrima, ad oras ſæpe purpurea, infima minora, obcordata, caulina majora longe petiolata, remota, ovato-oblonga, obtuſa, ſuprema breve petiolata, anguſtiora.

STIPULÆ oblongæ, ſemiamplexicaules, nervoſæ, bicuſpidatæ, apicibus prælongis.

FLORES in capitulis, ſolitariis, villoſis, primo ſubrotundis, demum ſubovatis.

CALYX perſiſtens, monophyllus, tubulatus, albidus, hirſutus, quinquedentatus, infimo dente cæteris dùplo longiore, *fig.* 1.

COROLLA papilionacea, monopetala, ochroleuca: *Vexillum* infra tubuloſum, tubo longitudine dentis calycinis infimi, limbo lanceolato, compreſſo, erecto, tubi longitudine; *Alæ Carinaque* cum vexillo coalitæ, iſtoque multo breviores, *fig.* 2.

STAMINA: FILAMENTA diadelpha ſimplex et novem fidum: ANTHERÆ ſimplices, minutæ flavæ.

PISTILLUM: GERMEN ſubovatum: STYLUS ſubulatus, adſcendens: STIGMA ſimplex.

PERICARPIUM: LEGUMEN calyce ſtriato incluſum, membranaceum, tener, tenue, monoſpermum.

SEMEN luteum.

ROOT perennial.

STALKS ſeveral, a foot to a foot and a half in length, upright, branched, round, hirſute, often purpliſh.

LEAVES hairy on both ſides, ſoft, perfectly entire, often purple at the edges, the lowermoſt ones ſmall, inverſely heart-ſhaped, thoſe of the ſtalk large, ſtanding on long footſtalks, ovato-oblong, obtuſe, the uppermoſt ones narrower, ſtanding on ſhort footſtalks.

STIPULÆ oblong, half embracing the ſtalk, ſtrongly ribbed, terminating in two long points.

FLOWERS growing in ſingle, villous heads, which at firſt are nearly round, and afterwards ſomewhat ovate.

CALYX continuing, monophyllous, tubular, whitiſh, hirſute, five-toothed, the lowermoſt tooth twice the length of the others, *fig.* 1.

COROLLA papilionaceous, monopetalous, pale yellow; *Standard* below tubular, tube the length of the lowermoſt tooth of the calyx, limb lanceolate, upright, length of the tube, ſides compreſſed, *Wings* and *Keel* united to the ſtandard, and much ſhorter than it, *fig.* 2.

STAMINA: FILAMENTS united in two bodies, nine and one; ANTHERÆ ſimple, minute, and yellow.

PISTILLUM: GERMEN ſomewhat ovate; STYLE tapering to a point, bending upward; STIGMA ſimple.

SEED-VESSEL: a POD contained within the ſtriated calyx, membranous, thin, tender, one-ſeeded.

SEED yellow.

The *Trifolium ochroleucon* borrows its name from the colour of its bloſſoms, which is pale yellow, or brimſtone, and that conſtantly ſo; by this character it is ſufficiently diſtinguiſhed from ſuch of our other Clovers as reſemble it in their general appearance: to this we may add the greater hairineſs of the whole plant, the unuſual length and uprightneſs of the Vexillum, as well as the diſproportionate length of the lowermoſt ſegment of the Calyx. Did ſuch diſtinctions generally prevail, enchanting indeed would be the ſtudy of plants!

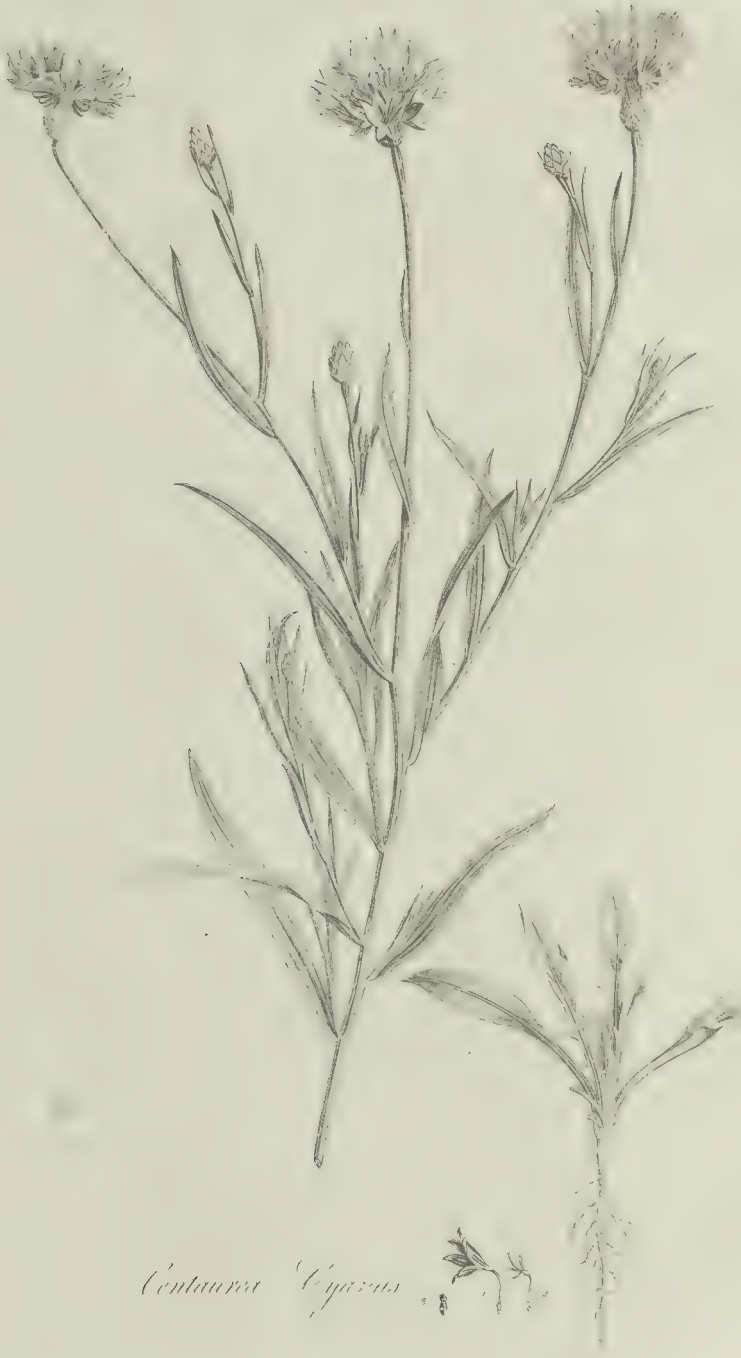
This ſpecies affects dry paſtures in the more eaſtern parts of the kingdom, and frequently ſuch as have a chalky or calcareous ſoil; in the environs of London it is rarely found; we have obſerved it ſparingly about Barnet: in ſome parts of Eſſex, eſpecially about Dunmow, it is particularly abundant, as we are aſſured by our excellent friend, Dr. JOHN SIMS, to whoſe botanical ſkill we are proud of acknowledging ourſelves frequently indebted: we have received roots of it alſo from LEWIS MAJENDIE, of Heddingham-Caſtle, Eſſex, of whoſe knowledge in agriculture, and of whoſe zeal in promoting his country's beſt intereſts, the annals of agriculture afford ample teſtimony.

It flowers in June and July.

From the great averſion it has to moiſture, we could never keep it in our garden at Lambeth-Marſh.

In point of produce it is ſuperior to the *Trifolium repens*, and, for certain ſoils and ſituations, it may perhaps prove a good ſubſtitute for it, or the *pratenſe*. We recommend it to the notice of the experimental agriculturiſt.

Trifolium velveteum



Centaurea Cyanus

CENTAUREA CYANUS. CORN BLUE-BOTTLE.

CENTAUREA. *Linn. Gen. Pl.* SYNGENESIA POLYGAMIA FRUSTRANEA.

Receptaculum ſetoſum. *Pappus* ſimplex. *Cor.* radii infundibuliformes, longiores, irregulares.

Raii Syn. Gen. 9. HERBÆ FLORE EX FLOSCULIS FISTULARIBUS COMPOSITO, SIVE CAPITATÆ.

CENTAUREA *Cyanus* calycibus ſerratis, foliis linearibus integerrimis: infimis dentatis. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 785. *Sp. Pl. ed.* 3. *p.* 1289. *Fl. Suec. n.* 776. *Lightfoot Fl. Scot. v.* 2. *p.* 499. Blue-bonnets. *Scot. Auſt. Hudſ. Fl. Angl. ed.* 2. *p.* 375.

CYANUS foliis imis ellipticis, dentatis, ſupremis linearibus, ſemifloſculis latiſſimis. *Haller Hiſt. n.* 191.

CENTAUREA *Cyanus. Scop. Fl. Carn.* 2. *p.* 138.

CYANUS ſegetum. *Bauh. Pin.* 273.

CYANUS vulgaris. *Ger. Herb. p.* 592.

CYANUS minor vulgaris diverſorum colorum. *Park. Theat. p.* 481. *Raii. Syn. ed.* 3. *p.* 198. Blue-bottles.

RADIX annua, ſubfuſiformis, lignoſa, fibroſa.

CAULIS erectus, bi-tripedalis, ſubangulatus, tomento araneoſo veſtitus, fiſtuloſus, ramoſus; *Rami* erecti, caule altiores.

FOLIA caulina alterna, ſeſſilia, linearia, 3 ad 5 nervia, acuta, pagina ſuperior alba, tomentoſa, inferior viridis, nudiuſcula, infima radicalia in adoleſcenti planta multo latiora, obtuſiora, et ſubintegra, iis proxima plus minuſve dentata, aut laciniata.

FLORES læte cærulei, inodori; *Pedunculi* ſimplices, ſuperne incraſſati.

CALYX *communis* ſubrotundus, imbricatus, ſquamis lanceolatis, interioribus longioribus, integris, ſuperne ruſeſcentibus, apice fibris fuſceſcentibus ciliatis; exterioribus brevioribus, ſerratis, ſerraturis reflexis.

COROLLA compoſita, floſculoſa, difformis, *Corollulæ hermaphroditæ* plurimæ in diſco, *fig.* 2. *femineæ* pauciores, majores, laxæ in radio, *fig.* 1. *propr. hermaph.* 1-petala, tubo filiformi, obliquo, limbo ventricoſo, oblongo, erecto, terminato laciniis 5-linearibus, erectiuſculis, *femineis* 1-petala, tubo tenui, ſenſim ampliato, recurvo, limbo oblongo, inæqualiter diviſo, ſubplicato, laciniis lanceolatis.

STAMINA *hermaphroditis:* FILAMENTA 5, capillaria, breviſſima; ANTHERA cylindracea, tubulata, corolla paulo longior.

PISTILLUM *hermaphroditis:* GERMEN parvum; STYLUS filiformis, longitudine ſtaminum; STIGMA obtuſiſſimum, acumine bifido prominens. *Femineis:* GERMEN minimum; STYLUS vix ullus; STIGMA nullum.

SEMINA *hermaphroditis* ſolitaria; *Pappus* ſetaceus, *fig.* 3.

ROOT annual, ſomewhat ſpindle-ſhaped, woody, and fibrous.

STALK upright, two or three feet high, ſomewhat angular, covered with a kind of cobwebby down, hollow, branched; the *Branches* upright, taller than the ſtalk.

LEAVES of the ſtalk alternate, ſeſſile, linear, from three to five-ribbed, pointed, the upper ſide white, and cottony, the underſide green, with ſcarcely any cottony ſubſtance, the lowermoſt radical leaves in the young plant much broader, blunter, and for the moſt part entire, the next to them more or leſs toothed or jagged.

FLOWERS of a bright blue colour and ſcentleſs; *Flower-Stalks* ſimple, thickened above.

CALYX *common to all the florets*, nearly round, imbricated, ſcales lanceolate, the inner ones longeſt, entire, reddiſh above, fringed at top with little browniſh fibres; the outer ones ſhorter, ſerrated, the teeth reflexed.

COROLLA compound, floſculoſe, miſhapen; the *hermaphrodite florets* in the centre numerous, *fig.* 2. the *female florets* in the circumference fewer, larger, and looſe, *fig.* 1. *each ſingle hermaphrodite floret* monopetalous, the tube filiform, oblique, the limb bellying, oblong, upright, terminating in five linear nearly upright ſegments, the *female florets* monopetalous, the tube ſlender, gradually enlarging and bent back, the limb oblong, unequally divided, ſomewhat folded, the ſegments lanceolate.

STAMINA of the *hermaphrodite* flowers: FILAMENTS five, capillary, very ſhort; ANTHERÆ forming a cylindrical tube, a little longer than the corolla.

PISTILLUM of the *hermaphrodite* flowers: GERMEN ſmall; STYLE filiform, the length of the ſtamina; STIGMA very blunt, with a prominent bifid point. Of the *Female* flowers: GERMEN very minute; STYLE ſcarcely any; STIGMA none.

SEEDS from the *hermaphrodite* florets, ſolitary; *Pappus* or Down briſtly, *fig.* 3.

Few of the vegetable tribes are more hardy than the Corn Blue-Bottle; its ſeedling plants, which come up abundantly in Autumn, brave the ſevereſt froſts.

The radical leaves are entire, thoſe which follow uſually toothed, ſometimes deeply jagged, hence foliis *inferioribus* dentatis, would be more proper than *infimis*.

We have repreſented a ſeedling plant, as it appears in the Spring; when the plant flowers, it loſes in common with many others its radical leaves, and with them part of its ſpecific character.

It grows abundantly in moſt of our corn-fields, which it enlivens by the brilliancy of its flowers during the months of June and July: the huſbandman views it as a pernicious weed requiring his greateſt care to eradicate, as it is not only very injurious to his corn, but blunts the ſickles uſed in reaping it, whence its name of *hurt-ſickle* found in ſome old authors.

Though a troubleſome weed, agriculturally conſidered, the beauty of its flowers has recommended it to the garden, in which it is now regularly ſown, as an ornamental plant, with other annuals, and appears with a great diverſity of colours.

A fine blue for colouring is ſaid to have been extracted from the bloſſoms of this plant; we ſhould ſtrongly ſuſpect the durability of colour ſo obtained: the blue uſed by my artiſts in colouring its outermoſt petals is called azure blue, and may be had, by ſuch as find a difficulty in obtaining good colours, of Mr. WILLIAM GRAVES, Newington, Surrey, principal colourer of this work, whoſe unwearied care to do juſtice to his employer, has contributed not a little to advance the reputation both of the Flora Londinenſis and Botanical Magazine.

ANTIRRHINUM LINARIA var. *Peloria*.

The Variety of TOAD-FLAX called *Peloria*.

The earlieſt account that we find of the *Peloria* is in the firſt volume of the *Amœnitates Academicæ* of LINNÆUS, publiſhed in 1749; it there forms a diſtinct theſis or diſſertation, written by DANIEL RUDBERG, who enters minutely into the hiſtory of the plant, deſcribes it fully, and illuſtrates it by an engraving.

The plant appears to have been firſt diſcovered in the year 1742, growing in a province of Sweden, about ſeven miles from Upſal, by a botanical ſtudent of the name of ZIOBERG, who gathered a ſpecimen of it, and placed it in his herbarium, as a plant he had not before ſeen, ignorant at the ſame time of its nature and œconomy, and of the value of his diſcovery: in the ſame year Profeſſor CELSIUS, no leſs celebrated for his knowledge of plants than of languages, happening to look over Mr. ZIOBERG's collection, was immediately ſtruck with the extraordinary appearances of this novelty; but the ſtate it was in, being dry and ſtuck on paper, prevented him at that time from examining it to the extent he wiſhed. In a ſhort time the Profeſſor had an opportunity of ſhewing it to LINNÆUS, who after looking at it with great attention, proclaimed it to be a ſpecimen of *Antirrhinum Linaria*, with the flowers, as he ſuſpected, of ſome exotic, ſtuck on it, inſtead of its own; ſuch deceptions are well known to be ſometimes practiſed, but on opening one of the flowers, he was convinced that his ſuſpicions were unfounded: he now became impatient to poſſeſs the living plant, roots of which, at his requeſt, were ſent him by Mr. ZIOBERG, and planted in the botanic garden at Upſal, but did not ſucceed: theſe would have been replaced in 1743, but the plants where they originally grew had been obliterated by cattle: the ſame injury befel them in 1744, ſo that it is probable LINNÆUS did not enjoy the pleaſure he ſo ardently wiſhed for, of ſeeing it bloſſom; and there is reaſon to conclude, that both the deſcription and figure in the *Amæn. Acad.* were taken from ZIOBERG's dried ſpecimen, which will in ſome degree apologiſe for the inaccuracy of both; that of the former we ſhall have occaſion to mention in the ſequel of this account.

Since the above diſſertation was publiſhed, the *Peloria* has been found wild in various parts of Germany, and alſo in this our iſland. Mr. HUDSON, in the firſt edition of his *Flora Anglica*, mentions it as growing near Clapham, Surrey; but as no botaniſt has obſerved it there ſince that publication, and as in the ſecond edition of the ſaid work the fact is no longer noticed, we may reaſonably conclude that Mr. HUDSON was miſtaken.

In the year 1792, Mr. ORDOYNO, Nurſeryman at Newark-upon-Trent, moſt obligingly ſent me ſome roots of this plant, found growing wild by Mr. LEIGHTON, of Brocklesby, near Brigg in Lincolnſhire, in ſome woods belonging to Mr. PELHAM; theſe were planted in a pot, and flowered with me ſparingly in 1793: this ſummer, 1794, in the beginning of Auguſt, they produced a great number of flowering ſtems, and flowers in abundance, every one of which was true to its character; but though the parts of fructification were perfect, no ſeed-veſſels were formed; its failure in this reſpect I attribute to my keeping the plant in too ſheltered a ſituation, as a plant from the ſame root growing in a pot at Mr. VERE's, Brompton Park-Houſe, Kenſington-Gore, under the management of his gardener WILLIAM ANDERSON, produced two perfect ſeed-veſſels, containing many to all appearance well-conditioned ſeeds: we may obſerve that the flowers of the *Linaria* itſelf are rarely fertile, unleſs the plant be expoſed to an open ſunny aſpect.

When the *Peloria* was firſt publiſhed in the *Amænit. Acad.* LINNÆUS regarded it as a new genus, the characters of which are there deſcribed, he was inclined to think that it might be a hybrid plant, generated betwixt the LINARIA, and ſome other unknown vegetable; the ſexuality of his ſyſtem often led the great LINNÆUS to indulge in whims of this ſort, in the *Sp. Pl. ed.* 3. we find him to have relinquiſhed the opinion of its being a diſtinct genus*, but ſtill adhering to his favourite idea of hybridity, now, as far as relates to this plant, very generally exploded. Prof. MURRAY has obſerved, that the flowers of the genus *Antirrhinum* are peculiarly ſubject to monſtroſity; we ourſelves have frequently ſeen the flowers of the common Toad-Flax with two or three ſpurs, and thoſe of the *majus* having a tendency to a Peloria-like appearance, but never to aſſume the regularity which conſtitutes the beauty and extreme ſingularity of that plant; there is, however, no appearance in the ſtructure of the flowers of the *Peloria* but what may be traced to thoſe of the *Linaria*, of which they certainly are a moſt wonderful modification, and hence there does not appear to be the leaſt neceſſity for having recourſe to any preternatural ſexual intercourſe to explain this extraordinary phænomenon.

The monſtroſity in the *Peloria* appears to be confined wholly to the Corolla with its attendant Stamina, which is hereby rendered a ſpecies of *Flos multiplicatus*, there is nothing in the other parts of the plant to diſtinguiſh it from the common Toad-Flax; that the difference in the flowers of the two plants might be more obviouſly ſeen, we have had a flower of the *Linaria* engraved on the ſame plate, *fig.* 7. this in *Peloria* is ſo metamorphoſed as ſcarcely to retain one original feature; the calyx, *fig.* 1. varies but little, not at all in the number of its diviſions; the Corolla from being irregular becomes regular, below it is dilated, above contracted, ſo as to form a tubular kind of neck, terminating in a prominent circular rim, which rolls back and is divided into five regular ſhort ſomewhat obtuſe ſegments, *fig.* 2. the mouth is internally villous, and puckered up ſo as to become impervious; inſtead of one depending ſpur-like Nectary, there are five, ſpringing from the baſe of the Corolla, *fig.* 3. and ſpreading out almoſt horizontally; the Stamina are increaſed from four to five, *fig.* 4. theſe moſt aſſuredly are attached to the Corolla, notwithſtanding LINNÆUS's aſſertion that they are *nullo modo corollæ affixa*, for on pulling off the Corolla, which eaſily ſeparates from the receptacle in the living plant, they come away with it; no very material alteration takes place in the form of the Filaments, or Antheræ, *fig.* 5. nor does the Piſtillum appear to partake of the monſtroſity, *fig.* 6. hence there is no phyſical cauſe for that ſterility, which moſt of the authors who have mentioned this plant attribute to it.

We regret extremely that we cannot as yet give a ſatisfactory anſwer to the Linnæan Quere in the *Amæn. Acad. an ex Peloriæ ſeminibus Linaria unquam enaſcatur;* we think it highly probable that the ſeeds of the Peloria will produce plants both of common Toad-Flax and Peloria, perhaps ſome bearing flowers common to both, ſuch as HALLER relates to have been obſerved by FABRICIUS; but this important fact remains to be aſcertained by actual experiments: with ſuch we are now engaged, and ſhall not fail taking the earlieſt opportunity of laying the reſult of them before our readers, when we treat of the *Antirrhinum majus*.

The *Peloria*, like the *Linaria*, increaſes greatly by its roots, like that plant it ſucceeds beſt in a dry ſoil and expoſed ſituation, and no plant thrives better in a pot.

LINNÆUS derives the name of this luſus from the greek word τελας which ſignifies any thing monſtrous; hence APOLLONIUS RHODIUS calls a monſtrous birth τελωρ τιξ.

* Linariæ proles hybrida—genus proprium conſtitueret niſi fructus ſemper abortiret—naturæ prodigium, *Linn. Sp. Pl. ed.* 3.

Pelorum

Hellebórus viridis

HELLEBORUS VIRIDIS. GREEN HELLEBORE.

HELLEBORUS. *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. o. *Petala* 5. f. plura. *Nectaria* bilabiata, tubulata, *Capſulæ* polyſpermæ, erectiuſculæ.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

HELLEBORUS *viridis* caule bifido, ramis folioſis biflоris, foliis digitatis. *Lin. Syſt. Vegetab. p.* 59. *Sp. Pl.* 784. *Scop. Carn. ed.* 2. *n.* 697. *Hudſ. Fl. Angl. ed.* 2. *p.* 245. *Lightf Scot. p.* 297. *Jacq. Fl. Auſtr. v.* 2. *t.* 206.

HELLEBORUS foliis multipartitis, ferratis, caule pauciflоro. *Hall. Hiſt. n.* 1192.

HELLEBORUS niger hortenſis flore viridi. *Baub. Pin.* 185.

HELLEBORASTER minor, flore viridante. Baſtard blacke Hellebor or Bearesfoote. *Pure.* 212.

HELLEBORASTRUM Wilde blacke Hellebor. *Ger. Herb. p.* 825. *f.* 2. *emac. p.* 976. *f.* 2. *Raii Syn. ed.* 3. *p.* 271.

VERATRUM nigrum II. *Dod. Pempt. p.* 385. *f.* 2.

RADIX perennis, ex fuſco nigricans, novos ſurculos quotannis promens, plurimis fibris, majuſculis capillata, fibris longis, radice ipſa pallidioribus, intus albicantibus, ſaporis amari, ſubacris, ingrati.

CAULIS ſubſolitarius, erectus, pedalis circiter, plerumque bifidus, ſubnudus, glaber, teretiuſculus, inferne purpuraſcens; ramis patentibus, folioſis, ſubbifloris.

FOLIA digitata, inæqualiter fiſſa, laciniis oblongo-lanceolatis, acutis, argute ferratis, venoſis, obſcure viridibus, lucidis; radicalia petiolata, multipartita, petiolo ſemitereti, ſulcato; caulina ad diviſiones ramorum pedunculorumque ſeſſilia tri-quadri-quinquelobata.

FLORES mediæ magnitudinis, ſubnutantes, virides, ſubſuaveolentes.

PEDUNCULI ſubcompreſſi, rugoſi.

CALYX nullus.

COROLLA: PETALA 5, ovata, obtuſa, calyciformia, viridia, foliis pallidiora, intus venoſa, perſiſtentia.

NECTARIA circiter decem, luteo-virentia, inter petala et ſtamina, in orbem poſita, erecta, tubuloſa, pedunculata, ore obſolete bilabiato, crenato, *fig.* 2.

STAMINA: FILAMENTA numeroſa, nectariis duplo longiora, ſubulata, luteſcentia; ANTHERÆ erectæ, ovales, pallidæ, *fig.* 1.

PISTILLUM: GERMINA a duobus ad ſex, raro plura, magna, oblonga, lævia; STYLI ſubulati, recurvati; STIGMATA obtuſa, craſſiuſcula, *fig.* 3.

ROOT perennial, of a blackiſh brown colour, putting forth yearly new ſhoots, furniſhed with numerous large fibres, which are long, paler than the root itſelf, whitiſh within, of a bitter, ſomewhat acrid, and unpleaſant taſte.

STALK uſually ſingle, upright, about a foot in height, generally bifid, almoſt naked, ſmooth, nearly round, below purpliſh, branches ſpreading, leafy, ſupporting for the moſt part two flowers.

LEAVES fingered, unequally cloven, ſegments oblong-lanceolate, pointed, finely ſerrated, veiny, of a dull green and gloſſy, thoſe next the root ſtanding on footſtalks, deeply divided into many ſegments, the footſtalk convex on one ſide, flat on the other, and grooved, thoſe of the ſtalk placed at the diviſions of the branches and peduncles, ſeſſile, three, four, or five lobed.

FLOWERS of a middling ſize, nodding ſomewhat, green, ſlightly odoriferous.

FLOWER-STALKS ſomewhat flattened and wrinkly.

CALYX none.

COROLLA: 5. PETALS, ovate, obtuſe, calyx-like, green, paler than the leaves, veiny on the inſide, continuing.

NECTARIES about ten, of a yellowiſh green colour, placed in a circle between the petals and ſtamina, upright, tubular, ſtanding on footſtalks, the mouth faintly two lip'd and notch'd, *fig.* 2.

STAMINA: FILAMENTS numerous, twice the length of the nectaries, tapering, yellowiſh; ANTHERÆ upright, oval, of a pale colour, *fig.* 1.

PISTILLUM: GERMINA from two to ſix, rarely more, large, oblong, ſmooth; STYLES tapering, bending back; STIGMATA blunt, thickiſh, *fig.* 3.

The *Helleborus viridis*, ſo called from the green colour of its flowers, is found ſparingly in the neighbourhood of London, we have ſeen it wild only in one ſpot, a ſmall wood near Finchley, where it was diſcovered by Mr. JACOB RAYER, a zealous and indefatigable labourer in the cauſe of Botany; in various other parts of the kingdom it is more common, but not generally ſo: with us it is uſually found in woods and copſes, eſpecially ſuch as have a moiſt ſtiff ſoil, which it particularly affects, and out of which it will not thrive; in different parts of Germany it is ſaid to grow in open mountainous ſituations, and where, if we may judge from Prof. JACQUIN's figure, it is leſs luxuriant than here.

It begins to flower in February, and continues in bloſſom through March and part of April; when favourably ſituated it produces ſeeds in abundance.

C. BAUHINE obſerves, that its roots are by many uſed medicinally; their qualities are moſt probably the ſame as thoſe of the *niger*, and *fœtidus*, and hence there is little doubt but they may be ſafely ſubſtituted for thoſe of the former, which is the true officinal plant: in fact they are ſo uſed in London. Mr. BABINGTON, who ſo honourably fills the ſtation of Apothecary to Guy's-Hoſpital, aſſures me that great quantities of its roots are yearly ſent up from the country, and uſed for thoſe of Black Hellebore; they are of a lighter colour, which is the moſt obvious character by which they are diſtinguiſhable: it is a fortunate circumſtance that from their being poſſeſſed of ſimilar qualities, the health of the public is not likely to receive any material injury from an impoſition ſo groſs, or from ignorance ſo unpardonable. VOGEL informs us in his Materia Medica, that the Francfort and Hambro' merchants frequently ſubſtitute the roots of the *Adonis vernalis* for thoſe of the *Helleborus niger*. To the injuries ariſing from ſuch impoſitions the public will be liable, while medical men are ſo inattentive to the few plants now uſed medicinally, and while the walking an Hoſpital, as it is called, and diſſecting a dead body, ſhall be conſidered as all-ſufficient to qualify for the moſt important profeſſion in life.

Melica Nutans. Mountain Melic-Grass.

MELICA *Linn. Gen. Pl.* Triandria Digynia.

Cal. 2-valvis, 2-florus. *Corpuſculum* pedicellatum inter floſculos. *Nectarium* monophyllum. *Stamina* baſi dilatata. *Linn. Syſt. Nat. ed.* 13. *Gmelin.*

Raii Syn. Gen. 27. Herbæ graminifoliæ flore imperfecto culmiferæ.

MELICA *nutans*, petalis imberbibus, panicula nutante ſimplici. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 112. *Sp. Pl. ed.* 3. *p.* 98. *Flor. Suec. ed.* 2. *p.* 26. *Scopoli Carn. ed.* 2. *p.* 67. *Lightf. Scot. v.* 1. *p.* 95. *Leers Herb. p.* 25. *Schreb. Agroſt. p.* 63. *ic.* 6.

MELICA *montana* petalis imberbibus, panicula coarctata, ſecunda, erecta, ſubſimplici, floribus pendulis. *Hudſon Fl. Angl. ed.* 2. *p.* 37.

POA panicula laxa, locuſtis nutantibus dianthis, alterno floſculo imperfecto. *Haller Hiſt. n.* 1472.

GRAMEN montanum avenaceum, locuſtis rubris. *Bauh. Pin.* 10.

RADIX perennis, fibroſa, ſubrepens.

CULMI pedales aut ſeſquipedales, ſimplices, erecti, folioſi, ſcabri, ſtriati, ſubanguloſi, inferne purpurei.

FOLIA ad baſin culmi brevia, ſquamæformia, fuſceſcentia, ſicut aſcendunt, longiora et anguſtiora evadunt; ſcabriuſcula, lineam cum dimidia lata.

LIGULA nulla.

PANICULA bi-triuncialis, ſubnutans, ſecunda, ſimplex, vel ramoſa; pedunculis capillaribus, rachi ſubappreſſis, flexuoſis, erectis, ad lentem villoſis, præcipue ad flores ubi paululum incraſſantur.

SPICULÆ plerumque trifloræ, rudimento floſculi pedicellato clavato, *fig.* 3.

CALYX: *Gluma* bivalvis, valvulis inæqualibus, ovatis, obtuſis, obſolete nervoſis, primo purpureis, demum fuſceſcentibus. *fig.* 1.

COROLLA: *Gluma* bivalvis, valvulis inæqualibus, exteriore magna, concava, ovata, multinervia, nervis pleriſque mediam valvulæ vix attingentibus; interiore lata, plana, multo breviore, *fig.* 2.

STAMINA: Filamenta 3 capillaria, diſtincta; Antheræ flavæ, *fig.* 4. 8.

GERMEN: lato-ovatum, pellucidum; Styli duo, inferne nudi, ſuperne plumoſi, patentes, *fig.* 6. 9.

NECTARIUM: *Glumulæ* duæ, carnoſæ, truncatæ, *fig.* 7.

ROOT perennial, fibrous, ſomewhat creeping.

STALKS a foot or a foot and a half high, ſimple, upright, leafy, rough, ſtriated, ſomewhat angular, below purpliſh.

LEAVES at the baſe of the ſtalk ſhort, ſcale-like, browniſh, as they aſcend becoming longer and narrower, a line and a half broad, and ſlightly rough.

MEMBRANE at the baſe of the leaf wanting.

PANICLE two or three inches long, bending down a little, with the flowers inclining one way, ſimple or branched; peduncles capillary, preſſed to the rachis, crooked, upright, villous if magnified, eſpecially at the flower, where they are ſomewhat thickened.

SPICULÆ uſually three-flowered, rudiment of the floret forming a ſort of club, *fig.* 3.

CALYX: a *Glume* of two valves, valves unequal, ovate, blunt, faintly ribbed, at firſt purple, laſtly of a browniſh hue, *fig.* 1.

COROLLA: a *Glume* of two valves, valves unequal, the outer one large, concave, ovate, many-ribbed, moſt of the ribs ſcarcely reaching half its length; the inner one broad, flat, and much ſhorter, *fig.* 2.

STAMINA: 3 capillary Filaments, quite diſtinct; Antheræ yellow, *fig.* 4. 8.

GERMEN of a broad ovate form, and pellucid; Styles two, naked below, above feathery, and ſpreading, *fig.* 6. 9.

NECTARY: two little *Glumes*, fleſhy, and truncated, *fig.* 7.

This elegant ſpecies of *Melica* inhabits rocky and ſhady ſituations in the more Northern parts of Europe; Mr. Hudson mentions it as growing in the mountainous woods of Yorkſhire, Weſtmoreland, and Cumberland; Mr. Lightfoot plentifully in Scotland; we obſerved it abundantly in Graſs-Wood, near Graſſington, in the neighbourhood of Kilnſay, Yorkſhire, a moſt romantic ſpot, and fertile in rare plants.

It flowers in July and Auguſt.

Mr. Lightfoot obſerves that it varies with flowers nearly ſeſſile, growing in a ſpike inſtead of a panicle.

Leers deſcription and delineation of the minute parts of the fructification in this ſpecies, contrary to what we generally find in his excellent work, diſtinguiſhed and much depended on for its accuracy, are very erroneous; the filaments are not united at the baſe, nor is the nectary formed of one entire circular piece, but of two, having the appearance indeed of one, ſeparable on a nice diſſection; they do not entirely ſurround the germen; it is the more neceſſary to notice this circumſtance, as it appears to have miſlead Profeſſor Gmelin, who makes the *Nectarium monophyllum* a part of the generic character in the *Melica*. Profeſſor Schreber's magnified repreſentation of the nectary, to which the ſame fault is imputable, may have contributed its ſhare alſo.

Schreber, Haller, and Scheuchzer, refer to the *gramen montanum ſpicatum* of Clusius for our plant, but it accords ſo ill with it, both as to figure and deſcription, that we ſuſpect that author muſt have meant ſome other plant.

Genera undoubtedly run into one another, but ſurely there is a wide difference between the fructification of this plant and that of a *Poa*, to which it is referred by Baron Haller, and of an *Aira*, to which Profeſſor Gmelin hints that it might be joined.

This ſpecies of Melica is eaſily cultivated by parting and planting out its roots in autumn, it is to be admired for its elegance, but has little pretenſions to be regarded for its utility.

Vicia nutans

Salvia Verbenaca

Salvia Verbenaca. Wild Sage, or Clary.

SALVIA *Linn. Gen. Pl.* Diandria Monogynia.

Corolla inæqualis. *Filamenta* tranſverſe pedicello affixa.

Raii Syn. Gen. 14. Suffrutices et herbæ verticillatæ.

SALVIA *Verbenaca* foliis ſerratis ſinuatis læviuſculis, corollis calyce anguſtioribus. *Linn. Syſt. Vegetab. ed.* 14. *p.* 70. *Sp. Pl. p.* 35. *Lightfoot Scot. v.* 1. *p.* 79. *Hudſ. Fl. Angl. ed.* 2. *p.* 10.

HORMINUM ſylveſtre Lavendulæ flore. *Bauh. Pin.* 239. *Park. Th. p.* 57. Wild Clary with Spike Flowers. *Raii Syn. ed.* 3. *p.* 237. Common Engliſh wild Cary.

HORMINI ſylveſtris IIII. quinta ſpecies. *Cluſ.* 2. *p.* XXXI.

HORMINUM ſylveſtre. *Ger. Herb. p.* 628. Wild Clarie or Oculus Chriſti; as to the deſcription, the figure doubtful, the radical leaves being too pointed and the flowers too large. *Ger. emac. p.* 771. *f.* 1.

RADIX perennis, fuſca, craſſitie digiti intermedii deſcendens, plurimis fibris capillata.

ROOT perennial, brown, the thickneſs of the middle-finger, ſtriking deep into the earth, and furniſhed with numerous fibres.

CAULES erectiuſculi, bipedales, tetragoni, piloſi, pilis horizontalibus, ſubviſcidis, ad nodos præcipue purpuraſcentes, ramoſi; Rami oppoſiti.

STALKS nearly upright, two feet high, four-cornered, hairy (hairs horizontal, ſomewhat viſcid) purpliſh, eſpecially at the joints, branched; Branches oppoſite.

FOLIA radicalia longe petiolata, variabilia, oblonga, apice nunc rotundata, nunc acutiuſcula, baſi nonnunquam cordata, fæpius vero folium in petiolum utrinque decurrit et ad unum latus longius extenditur, hirſutula, ſinuato-ſerrata, ſubtus pallidiora, venoſa et punctis glanduloſis excavatis notata; caulina remotiuſcula, inferiora petiolata, petiolis brevioribus, ſuprema ſeſſilia.

LEAVES next the root ſtanding on long footſtalks, variable in their form, oblong, ſometimes rounded at the extremity, ſometimes a little pointed, not unfrequently heart-ſhaped at the baſe, but more commonly the leaf runs down on each ſide of the footſtalk, and to a greater length on the one ſide than on the other, very ſlightly hirſute, on the margin irregularly waved and ſawed or toothed, of a paler colour on the under ſide, veiny and marked with ſmall glandular concave dots; the ſtalk-leaves ſomewhat remote, the lowermoſt of them ſtanding on ſhort foot-ſtalks, the uppermoſt ſeſſile.

FLORES verticillati, verticillis nudiuſculis, ſubſexfloris.

FLOWERS growing in whorls, ſomewhat naked, containing about ſix flowers.

BRACTEÆ cordatæ, acuminatæ, deflexæ, floribus breviores.

FLORAL-LEAVES heart-ſhaped, long-pointed, turned down, ſhorter than the flowers.

CALYX: Perianthium monophyllum, bilabiatum, purpuraſcens, viſcidulum, perſiſtens; labium ſuperius obovatum, mucrone brevi fæpius terminatum, trinerve, nervis duobus abbreviatis, labium inferius nervoſum ad dimidiam fere bifidum; laciniis ovato-lanceolatis, mucronatis, ſurſum curvatis, *fig.* 1.

CALYX: a Perianthium of one leaf, two lip'd, purpliſh, ſlightly viſcid, and continuing; the upper lip obovate, moſt commonly terminated by a ſhort point, three-rib'd, two of which are much ſhorter than the middle one; the lower lip rib'd, divided nearly half way down, ſegments ovato-lanceolate, pointed, turned up, *fig.* 1.

COROLLA monopetala, inæqualis, violacea, calyce paulo longior; *Tubus* ſuperne ampliatus, compreſſus; *Limbus* ringens; *Labium* ſuperius concavum, compreſſum, incurvum, emarginatum; *Labium* inferius latum, trifidum, lacinia media majori, rotundata, depreſſa, emarginata, *fig.* 2.

COROLLA monopetalous, unequal, violet-coloured, a little longer than the calyx; *Tube* above enlarged, flattened; *Limb* gaping; upper *Lip* concave, flattened, bent downwards, emarginate; lower *Lip* broad, trifid, middle ſegment largeſt, rounded, depreſſed, emarginate, *fig.* 2.

STAMINA: Filamenta duo, brevia; Antheræ oblongæ, nigræ, *fig.* 3.

STAMINA: Two Filaments, ſhort; Antheræ oblong, black, *fig.* 3.

PISTILLUM: Germen quadrifidum; Stylus filiformis, longus; Stigma bifidum, *fig.* 4.

PISTILLUM: Germen quadrifid; Style filiform, long; Stigma bifid, *fig.* 4.

SEMINA quatuor in fundo calycis, ſubrotunda, nigra, *fig.* 5, 6.

SEEDS four in the bottom of the calyx, of a roundiſh figure and black colour, *fig.* 5, 6.

The Salvia Verbenaca is a common plant, not only in dry paſtures and uncultivated places near London, but generally throughout the kingdom; we have frequently remarked that it very often occurs in Church-Yards.

It flowers during moſt of the ſummer, and towards autumn produces abundance of ſeeds, which ſcattering on the ground, and readily growing, diſpoſe this plant ſoon to become a weed.

It varies conſiderably in ſize, and very much in the form of its leaves; when bruiſed it emits a ſtrong and ſomewhat unpleaſant ſmell.

The ſeed put into water ſoon becomes inveſted with a thick mucilage.

Formerly it had ſome reputation as a medicinal plant; Gerard tells us, "That the ſeede put whole into the "eies cleanſeth and purgeth them exceedingly from wateriſh humours, redneſſe, inflamation, and divers other "maladies, or all that happen unto the eies; and takes away the pain and ſmarting thereof, eſpecially being put "into the eies one ſeed at one time and no more." Ray, who was too credulous in matters of this ſort, attributes their efficacy to their form and ſmoothneſs; we have heard their mode of operating accounted for in ſome other way: but ſurely there is a manifeſt abſurdity in the idea thus entertained of their efficacy, and no ſmall danger attendant on their uſe: the putting a hard ſubſtance into a part naturally ſo tender as the eye, muſt at any time be ſufficient to excite inflammation, and at all times increaſe it; we therefore caution ſuch of our readers as are fond of uſing the edged tools of medicine, to be on their guard againſt applying ſo doubtful a remedy in diſeaſes of an organ ſo exquiſitely formed.

BROMUS DIANDRUS. DIANDROUS BROME-GRASS.

BROMUS. *Linn. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Spicula* oblonga, teres, diſticha; ariſta infra apicem.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

BROMUS *diandrus* panicula erecto-patente, ſpiculis multifloris, floſculis diandris.

BROMUS *muralis* panicula patulo-erecta ſimplici, ſpiculis linearibus, floribus acuminatis ſcabris, ariſtis longis. *Hudſ. Fl. Angl. ed.* 2. *p.* 50.

BROMUS *madritenſis* panicula rariore patulo-erecta; ſpiculis linearibus; intermediis geminis, pedicellis ſuperne incraſſatis. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 120. ?

GRAMEN bromoides, pumilum, locuſtis erectis, majoribus, ariſtatis. *Scheuchz. Agr. ed. Hall. p.* 260.

BROMOS ſterilis erecta panicula major. *Barr. ic.* 76. *n.* 1.

We many years ſince obſerved the graſs here repreſented, growing on the wall of a garden near Batterſea Church, ſituated at a ſmall diſtance from the high-road which leads from the bridge to Batterſea, out of which you turn in proceeding to the church;—a few yards down this turning, on the garden-wall to the right, it will readily be found: for on the ſame ſpot, we obſerved it again this preſent ſummer, in company with Mr. OGLE, Surgeon, Great Ruſſel-Street, Bloomſbury; on the top of the wall it was in a ſtunted ſtate, at the foot of it more luxuriant.

On the firſt diſcovery of this plant, I was induced, from a curſory view, to regard it as a variety of *Bromus ſterilis*, with peduncles ſhorter than uſual; but having introduced it to my garden, and found that ſeveral years culture made no alteration in its principal character, I had little doubt of its being a diſtinct ſpecies, and the little I had was completely removed, when I came to diſſect the parts of fructification; for, to my great aſtoniſhment, I found that there were only two ſtamina to each flower, and that generally.

Growing in the ſame ſituation as the *ſterilis*, it is a ſmaller plant; the ſpiculæ in the *ſterilis* ſtanding on long peduncles (whereby they are rendered weaker) conſtantly droop; in the *diandrus* the peduncles being ſhort, ſupport the ſpiculæ in an upright poſition; this gives a different air to the plant, which otherwiſe from the great ſimilarity of its ſtalks, foliage, ſize and form of its ſpiculæ, would be very liable to be confounded with the *ſterilis*.

In dry ſeaſons, when the *Bromus diandrus* grows on walls, it is much ſhorter than the plant we have figured; in ſuch ſituations, more particularly as the plant advances to maturity, the panicle cloſes together, and the ſpiculæ become of a browniſh purple hue; in this ſtate it differs ſtill more obviouſly from the *ſterilis*, and may be diſtinguiſhed even at a diſtance: we are not, however, to regard this plant as confined to walls; like the *ſterilis*, it is found on them by accident: we obſerved it in the year 1793, on the banks of the Severn, at the foot of St. Vincent's Rock, where my very good friend, Dr. FORD, then reſident at Briſtol, alſo obſerved it to grow in great plenty.

If our plant be the *Bromus madritenſis* of LINNÆUS, which we are induced to believe, from its according ſo well with the figure of BARRELIER, to which he refers, it will be found to be a native of Spain, and Italy, and perhaps of other different parts of Europe: there can be little doubt of its being the *muralis* of Mr. HUDSON, though he has omitted to notice the peculiar circumſtance of its having only two ſtamina, a phenomenon ſo unuſual in plants of this tribe, that we have thought it ought to receive its trivial name from it, more eſpecially as the plant is found to be confined to no particular country or ſituation.

It flowers in May and June, and ripens its ſeeds in July; is an annual of ready growth, and much diſpoſed to become a weed.

Unleſs the flowers are examined when very young, the freſh ſtamina are not to be ſeen, but the flowers out of bloom generally retain them in a dried ſtate.

Of foreign graſſes there are ſeveral deſcribed with two ſtamina, in particular the *Saccharum Thunbergii* and *Koenigii*, and the *Agroſtis diandra*, *Linn. Syſt. Nat. ed.* 13. *Gmelin.* of our Engliſh graſſes, none ſuch as yet have been obſerved, beſides the preſent one, and the *Anthoxanthum odoratum*.

Partes Fructificationis.

Fig. 1. Glumæ Calycinæ.

Fig. 2. Glumæ Corollaceæ.

Fig. 3, 4, 5, 6. Gluma Corollacea interior, Stamina, Piſtillum, Nectaria, lente auct.

Fig. 7. Piſtillum magis auct.

The Parts of the Fructification.

Fig. 1. The Glumes of the Calyx.

Fig. 2. The Glumes of the Corolla.

Fig. 3, 4, 5, 6. The inner Glume of the Corolla, Stamina, Piſtillum, and Nectaries, magnified.

Fig. 7. The Piſtillum more enlarged.

Bromus diandrus

Trifolium saltuum

TRIFOLIUM SCABRUM. ROUGH TREFOIL.

TRIFOLIUM *Linn. Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Capſula* vel *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ſcabrum* capitulis ſeſſilibus lateralibus ovatis, calycibus inæqualibus rigidis perſiſtentibus. *Linn. Sp. Pl. ed.* 3. *p.* 1084.

TRIFOLIUM *ſcabrum* capitulis ſeſſilibus lateralibus ovatis, calycis laciniis inæqualibus rigidis recurvis. *Linn. Syſt. Vegetab. ed.* 14. *Murr. Scopoli Fl. Carn. ed.* 2. *p.* 81. *Hudſ. Fl. Angl. ed.* 2. *p.* 327.

TRIFOLIUM caulibus proſtratis, capitulis ovatis, in alis ſeſſilibus, calycibus rigidis, ſegmentis rectis. *Hall. Hiſt. Helv. n.* 371.

TRIFOLIUM floſculis albis, in glomerulis oblongis aſperis, cauliculis proxime adnatis. *Raii Syn. ed.* 3. *p.* 329. *Vaill. Par. t.* 33. *f.* 1.

RADIX annua, fibroſa.

CAULES ex eadem radice plures, procumbentes, triunciales ad ſemipedales et ultra in planta culta, teretes, flexuoſi, pilis longis ſubappreſſis veſtiti, ramoſi.

FOLIA in eadem planta varia, inferiora plerumque obovata, obtuſa, ſuperiora ovata, acuta, uti caulis piloſa, mucrone terminata, ſubdenticulata, venis ad marginem ſuperne præter morem prominentibus.

STIPULÆ nervoſæ, acuminatæ, rubro ſtriatæ.

FLORES albi, parvi, anguſti, capitati, capitulis ovatis, ſeſſilibus, lateralibus.

CALYX: PERIANTHIUM monophyllum, tubulatum, quinquefidum, villoſum, in floreſcente planta rubedine tinctum, laciniis majuſculis, lanceolatis, rectiuſculis, duabus ſuperioribus minoribus, peracta floreſcentia reflexo-patulis, rigidulis, tubus ſulcatus, *fig.* 1.

COROLLA papilionacea; VEXILLUM rectiuſculum, obtuſum; ALÆ vexillo paulo breviores, obtuſæ; CARINA longitudine fere alarum, *fig.* 2.

STAMINA: FILAMENTA 10, capillaria, alba; ANTHERÆ flavæ.

PISTILLUM: GERMEN oblongum, viride; STYLUS longitudine ſtaminum; STIGMA capitatum.

SEMINA intra calycem nervoſum ſolitaria, lutea, ovalia, nitida.

ROOT annual and fibrous.

STALKS many from the ſame root, procumbent, from three to ſix inches in length or more in the cultivated plant, round, crooked, covered with long hairs ſomewhat preſſed to it, branched.

LEAVES various in the ſame plant, the lower ones for the moſt part inverſely ovate, obtuſe, the upper ones ovate, and pointed, hairy like the ſtalk, terminating in a ſhort point, ſlightly toothed, veins near the margin on the upper ſide unuſually prominent.

STIPULÆ rib'd, long-pointed, ſtreaked with red.

FLOWERS ſmall, white, narrow, growing in little heads, which are ovate, ſeſſile, and lateral.

CALYX: a PERIANTHIUM of one leaf, tubular, divided into five ſegments, villous, in the flowering plant coloured with red, the ſegments ſomewhat large, lanceolate, nearly ſtraight, the two uppermoſt ones ſmalleſt, when the flowering is over ſpreading and ſomewhat bent back, a little rigid, the tube grooved, *fig.* 1.

COROLLA papilionaceous; STANDARD nearly ſtraight, obtuſe; WINGS a little ſhorter than the ſtandard, obtuſe; KEEL the length nearly of the wings, *fig.* 2.

STAMINA: ten white capillary FILAMENTS; ANTHERÆ yellow.

PISTILLUM: GERMEN oblong, green; STYLE the length of the ſtamina; STIGMA forming a little head.

SEEDS one within each rib'd calyx, yellow, oval, and gloſſy.

The *Trifolium ſcabrum* is a plant found in many parts of Europe, growing in open ſituations, and particularly affecting chalky, or calcareous ſoils; we have not obſerved it nearer London than the neighbourhood of Croydon; it grows abundantly in the Iſle of Shepey; is found alſo between Northfleet and Graveſend, and in various parts of the kingdom.

It takes its name of *ſcabrum* from the roughneſs of its heads, a character not altogether peculiar to this ſpecies.

It flowers in June and July, and grows readily from ſeeds.

The Calyces, which are tinged with red when the plant is in flower, become afterwards green.

In the ſpring of the year, while the plant is young, the foliage is remarkably pretty; the veins on the upper ſide of the leaf near the margin, which are unuſually prominent, being then moſt conſpicuous.

RAY has pointed out the leading features of this plant with his uſual acumen; and VAILLANT, in his *Botan. Pariſ.* has given a good figure of it; the hairineſs on the ſtalk is, however, ſomewhat too ſtrongly expreſſed.

It differs from the *Trifolium glomeratum*, already figured (with which it has ſome affinity) in a variety of particulars; in the *glomeratum* the heads are round, in the *ſcabrum* they are ovate; in the *glomeratum* the whole plant is ſmooth, in the *ſcabrum* it is hairy; in the *glomeratum* the flowers are red, in this they are white; in the *glomeratum* the leaves are ſtrongly toothed, here they are faintly ſo; there is a conſiderable difference alſo in the ſegments of the calyx, which deſerves a particular attention, as the ſpecific deſcription of HALLER and LINNÆUS taken from this part are greatly at variance; the former deſcribes them as ſtraight (*rectis*) obſerving that they differ in that from thoſe of the *glomeratum*; the latter deſcribes them as bent back (*recurvis*); the fact is, when the plant is in flower, which is the general ſuppoſed to be deſcribed, unleſs otherwiſe mentioned, the ſegments of the calyx are ſtraight, or nearly ſo; when out of bloom they bend back, as VAILLANT has repreſented them; in the *glomeratum* they bend back at a more early period, and always are more evidently recurved.

From Mr. ADAMS, of Pembroke, we received ſeeds of this plant growing on the ſea-coaſt, which he ſuſpected to be different from ours; on culture, it proved the ſame, varying ſomewhat in ſuperiority of ſize and roughneſs.

OPHRYS ANTHROPOPHORA. MAN OPHRYS.

OPHRYS *Linn. Gen. Pl.* GYNANDRIA DIANDRIA.

Nectarium ſubtus ſubcarinatum.

Raii Syn. Gen. 26. HERBÆ BULBOSIS AFFINES.

OPHRYS *anthropophora* bulbis ſubrotundis, ſcapo ſolioſo, nectarii labio lineari tripartito: medio elongato bifido. *Linn. Syſt. Vegetab. ed.* 14. *M.* 811. *S.* 1. *Pl. ed.* 3. *p.* 1343. *Hoſt. Fl. Angl. ed.* 2. *p.* 390.

ORCHIS radicibus ſubrotundis, ſpica longa, flore inermi, labello peranguſto quadrifido. *Hall. Hiſt. n.* 1264.

ORCHIS anthropophora oreades. *Col. Ecph.* 1. 320. *Raii. Syn. ed.* 3. *p.* 379. *Park.* 1348. 7.

ORCHIS flore nudi hominis effigiem repreſentans fœmina. *Bauh. Pin. p.* 82. *Vaill. Par. p.* 147. *t.* XXXI. *fig.* 19, 20.

RADIX bulbi duo, oblongi, odorati.

SCAPUS pedalis et ultra, folioſus, teres, glaber, ſuperne ſubanguloſus.

FOLIA radicalia in florente planta erectiuſcula, ovato-oblonga, obtuſiuſcula, glaberrima, pallide viridia, caulina pauca, anguſtiora.

FLORES numeroſi conferti, luteo virescentes, in ſpica ſubpalmari.

BRACTEÆ lanceolato-acuminatæ, virides, germine breviores, *fig.* 1.

COROLLA: PETALA quinque viridia, in galeam conniventia, *fig.* 3, 4. tria exteriora ovata, obtuſa, marginibus ruſis, duo interiora-linearia: *Nectarii* labellum petalis longius dependens, flaveſcens, in quibuſdam penitus ruſeſcens, tripartitum, laciniis linearibus, lateralibus ſubdivergentibus, intermedia elongata bifida, *fig.* 5, 6, paulo infra ſtigma quod profunde excavatum eſt, duæ ſunt glandulæ pellucidæ, nitidæ, valde conſpicuæ.

STAMINA: FILAMENTA 2 breviſſima; ANTHERÆ flavæ, *fig.* 7.

PISTILLUM: GERMEN teres, viride, tortuoſum, *fig.* 2.

ROOT two oblong bulbs, odoriferous.

STALK a foot or more high, leafy, round, ſmooth, ſlightly angular above.

LEAVES next the root in the flowering plant nearly upright, ovato-oblong, ſomewhat obtuſe, perfectly ſmooth, of a pale green colour, thoſe of the ſtalk few and more narrow.

FLOWERS numerous, growing thickly together, of a yellowiſh green colour, in a ſpike about a hand's-breadth in length.

FLORAL-LEAVES lanceolate, tapering to a point, green, ſhorter than the germen, *fig.* 1.

COROLLA: five PETALS, of a green colour, cloſing ſo as to form a hood, *fig.* 3, 4; the three outermoſt ovate, obtuſe, their edges reddiſh brown, the two innermoſt linear: the lip of the nectary longer than the petals, hanging down, yellowiſh, in ſome wholly reddiſh brown, divided into three ſegments, which are linear, the ſide ones diverging ſomewhat, the middle one elongated and bifid, *fig.* 5, 6; a little below the ſtigma, which is deeply hollowed out, are two pellucid ſhining glands, very conſpicuous.

STAMINA: two FILAMENTS very ſhort; ANTHERÆ yellow, *fig.* 7.

PISTILLUM: GERMEN round, green, twiſted, *fig.* 2.

The flowers of this ſpecies have been conſidered as bearing ſome ſimilitude to the effigies of a man, whence its name: the old authors in their figures of it have improved on this reſemblance, at the expence of truth. *Vid.* PARKINSON, *and others.*

It is a plant common to the more ſouthern parts of Europe, and is found chiefly on calcareous ſoils, with us principally in dry paſtures and old chalk pits, in ſuch ſituations it is one of the moſt common of the tribe in Kent; we have found it alſo plentifully in the chalk pits about Leatherhead and elſewhere.

It varies in ſize, and in the colour of its flowers, from yellow green to bright ferruginous; flowers in May and June, and is more eaſily cultivated than many others of the ſame genus.

The root, and indeed the whole plant, emits a ſtrong odour.

Ophrys
bidentipetalum

Galeopsis versicolor

GALEOPSIS VERSICOLOR. PARTICOLOURED GALEOPSIS.

GALEOPSIS *Linn. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Cor. labium ſuperius ſubcrenatum, fornicatum; inferius trifidum; faux utrinque dente obtuſiuſculo, concavo, acuto. *Linn. Syſt. Nat. ed. Gmel.*

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

GALEOPSIS *verſicolor* foliis ovatis acutis ſerratis, tubo floris calyce multo longiore.

GALEOPSIS *Tetrahit. Linn. Sp. Pl. ed.* 3. *var.* β

GALEOPSIS foliis ovato-lanceolatis, ſerratis, caule hirſuto flore calycis quadruplo. *Hall. Hiſt.* 269.

LAMIUM cannabinum aculeatum flore ſpecioſo luteo labiis purpureis. *Pluk. Alm.* 204. *t.* 41. *f.* 4.

CANNABIS ſpuria flore pallido labro purpureo elegante. *Merr. Pin.*

LAMIUM cannabino folio, flore amplo luteo, labio purpureo. *Raii Syn. ed.* 3. *p.* 241. Fair-Flowered Nettle Hemp, or rather Hemp-Leaved Dead-Nettle with a particoloured flower.

RADIX annua.
CAULIS ſeſquipedalis et ultra, erectus, ramoſiſſimus, obtuſe tetragonus, hirſutus, ad genicula incraſſatus.

RAMI alterne oppoſiti.
FOLIA caulina ovata, acuta, ramorum ovato-lanceolata, oppoſita, petiolata, ſubacuminata, venoſa, ſuperne pilis mollibus hirſutula, inferne nudiuſcula, nervo medio veniſque exceptis, ſerrata, dentibus verſus baſin ſenſim minoribus.

PETIOLI hirſuti.
FLORES magni, ſpecioſi, verſicolores, ſeſſiles, verticillati, verticillis multifloris, ſummis ſubcontiguis.
CALYX: PERIANTHIUM monophyllum, tubulatum, nervoſum, hirſutum, quinquedentatum, dentibus longitudine calycis, ſubæqualibus, ariſtatis, pungentibus, ore ciliato, ciliis demum intus convergentibus, tubus ſeminibus matureſcentibus, ventricoſus evadit, *fig.* 1.
COROLLA flava, calyce triplo fere longior, pilis mollibus villoſus, tubus cylindraceus, ſuperne ampliatus, labium ſuperius concavum, externe pilis longis hirſutum, denticulatum, a tubo ſulco tranſverſali diviſum, labium inferius trifidum, lobis lateralibus ex inferiore parte albidis, intermedio emarginato purpureo, albo marginato, ad baſin ſaturate flavo venis rubris pulchre reticulato hic utrinque exſeruntur cornicula duo obtuſa, *fig.* 2.

STAMINA: FILAMENTA quatuor, alba, quorum duo breviora; ANTHERÆ didymæ, primo rotundatæ, demum acutæ, ciliatæ, *fig.* 3.

PISTILLUM: GERMINA quatuor; STYLUS ſubulatus; STIGMA biſidum, *fig.* 4.
SEMINA quatuor, in fundo calycis, obtuſe trigona, apice rotundata, nigricantia, *fig.* 5.

ROOT annual.
STALK a foot and a half high or more, upright, very much branched, obtuſely four-cornered, covered with ſtrong rough hairs, thickened at the joints.
BRANCHES alternately oppoſite.
LEAVES of the ſtalk ovate and pointed, of the branches ovato-lanceolate, ſtanding on foot-ſtalks, ſomewhat long-pointed, veiny, above ſlightly hirſute from being covered with ſoft hairs, beneath almoſt ſmooth excepting the midrib and veins, ſerrated, teeth towards the baſe gradually ſmalleſt.
LEAF-STALKS hirſute.
FLOWERS large, ſhewy, particoloured, ſeſſile, growing in whorls, whorls many-flowered, the uppermoſt nearly contiguous.
CALYX: a PERIANTHIUM of one leaf, tubular, ribbed, hirſute, five-toothed, teeth the length of the calyx, nearly equal, ending in pungent awns, the mouth bearded, the hairs of which finally converge inwardly to a point, the tube as the ſeeds ripen bellies out, *fig.* 1.
COROLLA yellow, nearly thrice the length of the calyx, covered with ſoft hairs; the tube cylindrical, enlarged above, the upper lip concave, beſet on the outſide with long hairs, toothed on the edge, divided from the tube by a tranſverſe groove, the lower lip divided into three ſegments, the ſide lobes on the lower part nearly white, the middle lobe purple edged with white, its baſe of a deep yellow colour beautifully marked with red veins in the form of net-work; here riſe two ſmall blunt horns, one on each ſide, *fig.* 2.
STAMINA: four FILAMENTS of a white colour, two long, two ſhort; ANTHERÆ double, firſt nearly round, finally pointed and edged with hairs, *fig.* 3.
PISTILLUM: GERMINA four; STYLE tapering; STIGMA biſid, *fig.* 4.
SEEDS four in the bottom of the calyx, bluntly three-cornered, roundiſh at top, and nearly black, *fig.* 5.

There undoubtedly is in moſt points a great affinity betwixt this plant and the *Galeopſis Tetrahit;* but as the characters in which they differ are as conſtant as they are ſtriking, we have thought it entitled to the rank of a ſpecies, more eſpecially as many of the old writers have been of the ſame opinion, and ſeveral of the moderns.

In its habit it is ſhorter and more buſhy than the *Tetrahit*, its leaves are broader, and its flowers differ not only in colour but in ſize; there are many parts of the country alſo in which the one is found abundantly, the other not at all; and laſtly, it comes up from ſeeds every year invariably the ſame.

The beauty of its flowers is ſufficient to entitle it to a place in the Flower-Garden; its flowering period is not of very long duration: in corn-fields, where it is often found too abundantly, like the *Tetrahit* it is a very troubleſome weed, the rough hairs with which the plant is covered proving highly injurious to the hands and arms of the reapers.

In many parts of Yorkſhire we have ſeen this plant growing very plentifully among the corn; the fields about London are exempt from it.

It flowers in July and ripens its ſeeds in Auguſt; as theſe are produced in abundance and vegetate freely, ſuch as wiſh to have the plant in their poſſeſſion may ſucceed in its culture without any difficulty.

LATHYRUS NISSOLIA. CRIMSON LATHYRUS, or GRASS VETCH.

LATHYRUS. *Linn. Gen. Pl.* DIADELPHIA DECANDRIA.

Stylus planus, ſupra villoſus; ſuperne latior. *Cal.* laciniæ ſuperiores duæ breviores.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

LATHYRUS *Niſſolia* pedunculis unifloris, foliis ſimplicibus, ſtipulis ſubulatis. *Linn. Sp. Pl. v.* 2. *ed.* 3. *p.* 1029. *Syſt. Vegetab. ed.* 14. *Murr. p.* 662.

LATHYRUS pedunculis unifloris, foliis gramineis, ſtipulis minimis. *Hall. Hiſt. n.* 441.

LATHYRUS ſylveſtris minor. *Baub. Pin.* 344.

CATANANCHE leguminoſa quorundam. *J. B. II.* 309.

VICIA folio gramineo ſiliqua porrectiſſima. *Merr. p.*

LATHYRUS anguſtifolius erectus, folio ſingulari, ſine capreolis Niſſoli. *Magn. Hort.* 112. *t.* 112.

NISSOLIA parva flore purpureo. *Buxb. cent.* 3. *p.* 84. *t.* 45. *f.* 1.

ERVUM ſylveſtre. *Dodon. Pempt. p.* 529. *Ger. emac.* Crimſon graſſe Fetch. *p.* 1249.

ERVUM ſylveſtre ſive Catananche. Wild graſſe leafed Orobus. *Park. Th. p.* 1079.

RADIX annua, fibroſa.
CAULIS pedalis, et ultra, ſuberectus, ſimplex, raro ramoſus, angulatus, glaberrimus.

FOLIA alterna, erecto patula, ſeſſilia, ſubdecurrentia, ſimplicia, graminea, lanceolata, linearia, multinervia, inferne glaberrima, ſuperne glaucescenti-viridia, marginibus ſæpe eroſis.

STIPULÆ binæ, exiliſſimæ, ſubulatæ.
FLORES vivide purpurei, in pedunculis longis, ſubſolitarii, cernui.
PEDUNCULI axillares, ſolitarii, uniflori, rariſſime biflori, erecti, ſubangulati, læves, ſuperne prope florem bractea ſubulata inſtructa, inter florem et bracteam teretior evadit et pubeſcit.

CALYX: PERIANTHIUM monophyllum tubulatum, quinqueſidum, quinquenerve, laciniis lanceolatis acutis, inferiore longiore, ad lentem hirſutulis.
COROLLA papilionacea, vivide purpurea; *Vexillum* antice parum reflexum, dorſo compreſſum; *Alæ* ſubovatæ, vexillo breviores, concolores; *Carina* ſemiorbiculata, tumida, dilute rubens.

STAMINA: FILAMENTA diadelpha, ſimplex et novemfidum, aſſurgentia; ANTHERÆ ſubrotundæ, *fig.* 1, 2.
PISTILLUM: GERMEN compreſſum, oblongum, lineare; STYLUS planus; STIGMA antice villoſum. *fig.* 3.
PERICARPIUM: *Legumen* lineare, bipollicare, pendulum.

ROOT annual and fibrous.
STALK a foot or more in height, nearly upright, unbranched for the moſt part, angular, very ſmooth.
LEAVES alternate, betwixt upright and ſpreading, ſeſſile, ſomewhat decurrent, ſimple, graſſy, betwixt lanceolate and linear, many-ribbed, below perfectly ſmooth, above of a ſomewhat glaucous green colour, the edges often bitten.
STIPULÆ two, extremely ſmall, and awl-ſhaped.
FLOWERS of a brilliant purple colour, ſitting ſingly on long footſtalks, drooping.
PEDUNCLES axillary, ſolitary, one-flowered, very rarely two-flowered, upright, ſomewhat angular, ſmooth, on the upper part near the flower furniſhed with an awl-ſhaped bractea, betwixt the flower and the bractea it becomes rounder and ſlightly downy.
CALYX: a PERIANTHIUM of one leaf, tubular, five-ribbed, mouth divided into five ſegments, which are lanceolate, ſharp-pointed, the lowermoſt longeſt, ſlightly hirſute if magnified.
COROLLA papilionaceous, bright purple or crimſon; the *Standard* ſomewhat reflexed, and compreſs'd on the back; *Wings* ſomewhat ovate, ſhorter than the ſtandard, of the ſame colour; *Keel* ſemiorbiculate, tumid, of a faint-red colour.
STAMINA: FILAMENTS in two bodies, one and nine, riſing upward; ANTHERÆ roundiſh, *fig.* 1, 2.
PISTILLUM: GERMEN flattened, oblong, linear; STYLE flat; STIGMA villous on the fore part, *fig.* 3.
SEED-VESSEL: a linear *Pod*, about two inches long, and pendulous.

It is in paſtures and among the graſſy herbage on the confines of woods and hedges that this ſpecies of Lathyrus, diſtinguiſhed for its graſs-like foliage and bright crimſon flowers, is chiefly found; in ſuch ſituations it is not very unfrequent in the neighbourhood of London: being an annual, its place of growth is liable to great variation, and it is with great difficulty found, unleſs when in flower, which it uſually is about the latter end of June: [illegible] in ſome parts of the Iſle of Sheppy, we have obſerved this plant ſtronger and in greater abundance than [illegible].

[illegible] with [illegible] blooſoms: DODONÆUS deſcribes his flowers as yellowiſh, and his figure, which is [illegible] to [illegible] this ſpecies, repreſents two bodies on a pentandrous.

[illegible] and [illegible] in the ſecond, and then when cultivated, its bloſſoms, being much more brilliant; they appear [illegible] among the wild graſſy herbage, where they have few or no formidable rivals: the period of its flowering is of very ſhort duration, and is a ſufficient objection to its being cultivated for ornament.

It is ſcarcely poſſible to gather a wild ſpecimen of this plant, which has not ſome of its leaves bitten on the edges, we have found this deſtruction to be occaſioned by a ſmall oblong Curculio, of a pale-brown colour, very deſtructive on certain lands, in the ſpring of the year, to the foliage of *leguminous plants in general;* in ſome ſprings, we have ſeen this inſect check the growth and greatly injure ſo large a plant as the common pea of the kitchen garden, and we have little doubt but whole Clover crops are deſtroyed by it juſt as they come into leaf, and the Seedſman, perhaps, blamed for the badneſs of his ſeed;—we are not acquainted with the hiſtory of this inſect, but recommend it to the ſerious attention of the agriculturiſt.

Lathyrus Nissolia

Orchis Bifolia

ORCHIS BIFOLIA. BUTTERFLY ORCHIS.

ORCHIS. *Linn. Gen. Pl.* GYNANDRIA DIANDRIA.

Nectarium cornu referens pone florem. *Cor.* ringens.

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

ORCHIS *bifolia* nectarii labio lanceolato integerrimo, cornu longiſſimo, petalis patentibus. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 808. *Sp. Pl. ed.* 3. *p.* 1331. *Scop. Carn. ed.* 2. *n.* 1102. *Huſſ. Fl. Angl. ed.* 2. *p.* 382. *Fl. Dan. t.* 235.

ORCHIS radicibus oblongis, labello lineari. *Hall. Hiſt. n.* 1285. *t.* 35.

ORCHIS alba bifolia minor calcari oblongo. *Bauh. Pin.* 83.

ORCHIS ſphegodes *ſ* Teſticulus vulpinus primus. *Park.* 1351. 7.

HERMAPHRODITICA. Bees Satyrion. *Ger. Herb. p.* 162. *fig.* 1. *emac. p.* 211. *f.* 1.

TESTICULUS pſycodes. Gnat Satyrion. *Ger. emac. p.* 211. *f.* 2.

ORCHIS hermaphroditica bifolia. *J. B. II.* 772. *Raii Syn. ed.* 3. *p.* 380. Butterfly Satyrion.

RADIX: bulbi duo, majuſculi, ovati, inferne acuminati.

ROOT: two bulbs, ſomewhat large, ovate, terminating below in long points.

CAULIS pedalis, et ultra, folioſus, lævis, hexagonus, nervis tribus e ſingulo folio decurrentibus.

STALK a foot or more in height, leafy, ſmooth, ſix-angled, three ribs running down from each leaf.

FOLIA radicalia plerumque duo, oppoſita, ovalia, glabra, nervoſa, obtuſiuſcula; caulina lanceolata, ſeſſilia.

LEAVES of the root uſually two, oppoſite, ovate, ſmooth, ribbed, ſomewhat blunt; thoſe of the ſtalk lanceolate and ſeſſile.

FLORES numeroſi, ex albido-luteſcentes, odorati, in ſpica longa laxiuſcula diſpoſiti.

FLOWERS numerous, of a yellowiſh-white colour, ſweet-ſcented, diſpoſed in a long and ſomewhat looſe ſpike.

BRACTEÆ longitudine germinis, lanceolatæ, foliis caulinis ſuperioribus ſimillimæ.

FLORAL-LEAVES the length of the germen, lanceolate, very like the uppermoſt leaves of the ſtalk.

COROLLA: PETALA quinque, tria ſuperiora conniventia, ſuprema cordata, obtuſa, incumbens, planiuſcula, marginibus reverſis, duo lateralia lanceolata, ſibi invicem verſus curvata, truncata, duo inferiora majora, alarum inſtar expanſa, ovata, acutiuſcula; *Labellum* dependens, alis longior, ſublineare, antice convexum, poſtice concavum, obtuſum, inferne vireſcens, *fig.* 1. *Calcar* germini duplo fere longior, melliferum, diaphanum, tenue, verſus apicem vireſcens, compreſſiuſculum et paulo dilatatum.

COROLLA: five PETALS, the three uppermoſt cloſing together, the uppermoſt one cordate, obtuſe, incumbent, flattiſh, the edges reverſed, the two ſide ones lanceolate, bent towards each other, truncated, the two lowermoſt larger, expanded like wings, ovate, and ſomewhat pointed; *Lip* dependent, longer than the wings, ſomewhat linear, convex on the fore part, concave behind, obtuſe, on the lower part greeniſh, *fig.* 1. *Spur* almoſt twice the length of the germen, honey-bearing, tranſparent, ſlender, towards the tip greeniſh, flattened a little, and ſomewhat ſpreading.

STAMINA: FILAMENTA duo, remota; ANTHERÆ flaveſcentes, *fig.* 2.

STAMINA: two FILAMENTS, ſituated remotely from each other; ANTHERÆ yellowiſh, *fig.* 2.

PISTILLUM: GERMEN longitudine bracteæ, tenue, tortuoſum, profunde ſtriatum.

PISTILLUM: GERMEN the length of the bractea, ſlender, twiſted, deeply ſtriated.

This ſpecies of Orchis has obtained the name of *bifolia*, on account of its radical leaves being uſually two in number, and placed oppoſite to each other; but this character is not perfectly to be relied on, as three are frequently met with, nor are thoſe radical leaves ſo ſtrictly oppoſite to each other as ſome authors have repreſented them, or as they are in the *Ophrys ovata;* the Engliſh name of *Butterfly Orchis* is ſcarcely warranted by the appearance of the flowers.

If not ſo common an *Orchis* as ſome, it is much more ſo than others, being found generally throughout the kingdom in woods, paſtures, and heaths, eſpecially in ſoils ſomewhat ſtiff and moiſt; in the firſt of theſe ſituations it is by far the moſt luxuriant, in the latter it is frequently ſo dwarfiſh as to be regarded as a variety; the lip of the nectary is alſo found to vary conſiderably in length in different ſpecimens.

It is obviouſly diſtinguiſhed from others of the genus by the colour of its bloſſoms, the extreme length of its ſpur, the delicious fragrance of its flowers, diffuſed moſt in the morning and evening, and which may vie with that of the honeyſuckle; but, above all, by the unuſual ſtructure of its flowers: below the ſtigma (remarkably well defined in this ſpecies) there is a circular foramen, *fig.* 2. between the cavities containing the ſtamina, juſt above the ſtigma, is a very conſpicuous ridge, *fig.* 3. the caſes containing the ſtamina, are placed widely diſtant from each other, and ſoon change to a browniſh hue; the ſtamina are very looſely placed within them, and drawn out with the ſlighteſt touch; the antheræ are club-ſhaped, and divided as in moſt others; the gland at the baſe of the filament is of a circular form, with a cavity on its inner ſide, *fig.* 7. and a kind of joint-like projection on its outer part, *fig.* 6. difficult to deſcribe;—taken altogether, this part is wonderfully curious, and deſerving of attention.

This ſpecies is not ſo difficult of culture as many others; and, as its roots are large, it appears to be as well calculated for the formation of ſalep as any other.

CHENOPODIUM RUBRUM. SMALL-SEEDED GOOSE-FOOT.

CHENOPODIUM. *Linn. Gen. Pl.* PENTANDRIA DIGYNIA.
Cal. 5-fidus, 5-coſtatus. *Cor.* 0. *Sem.* 1. lenticulare ſuperum horizontale calice conniventi tectum.

CHENOPODIUM. *Raii Syn. Gen.* 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS).

CHENOPODIUM *rubrum* foliis cordato-triangularibus obtuſiuſculis dentatis, racemis erectis compoſitis ſubfoliofis caule brevioribus. *Linn. Syſt. Nat. ed.* 13. *Gmel. p.* 413. *Syſt. Vegetab. ed.* 14. *Murr. p.* 261. *Sp. Pl. ed.* 3. *p.* 318. *Fl. Suec. ed.* 2. *p.* 78. *Lightfoot v.* 1. *p.* 148. *Hudſ. Angl. ed.* 2. *p.* 105.

CHENOPODIUM foliis glabris nitentibus, acute circumdentatis. *Hall. Hiſt. n.* 1588.

ATRIPLEX ſylv. latifolia. *Bauh. Pin.* 119.

ATRIPLEX ſylveſtris III. *Matth. p.* 462.

ATRIPLEX ſylveſtris latifolia ſive Pes Anſerinus. Gooſe-Foot. *Ger. emac. p.* 328. *f.* 1. *Park. p.* 749. *f.* 8.

BLITUM Pes Anſerinus dictum. Gooſe-Foot or Sow-Bane. *Raii Syn. ed.* 3. *p.* 154.

BLITO Pes Anſerinus dicto ſimilis. *Raii Syn. ed.* 3. *p.* 154.

BLITUM Moriſono Atriplex procumbens folio ſinuato lucido craſſo dictum. *Raii Syn. ed.* 3. *p.* 154.

Regarded by Mr. HUDSON as a variety of *murale*.

RADIX annua, fibroſa.

CAULIS pedalis, bipedalis, et ultra, plerumque erectus, inæqualiter ſtriatus, lævis, viridis, purpuraſcens etiam ruberrimus, nonnunquam ſimplex, ſæpius vero ramoſus, ramis inferioribus patentibus, et haud infrequenter decumbentibus.

FOLIA petiolata, ſubcarnoſa, glabra, nuda, ſubtus venoſa, in petiolum decurrentia, ſinuata, dentata, dentibus utrinque a baſin ſecundis cæteris plerumque multo majoribus, omnibus acutiuſculis et ſæpe rubro marginatis.

PETIOLI longi, at foliis ipſis breviores.

FLORES minimi, ſpicati, virides, purpuraſcentes, aut vivide purpurei, in glomerulis ſeſſilibus ſubrotundis denſe collocati, ſub ſingulo glomerulo foliolum glomerulo longius, hinc ſpicæ folioſæ evadunt, glomeruli ipſi etiam folioſi nonnunquam obſervantur.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, patentibus, margine membranaceis, demum clauſis, ſemen includentibus, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque, alba, calyce paulo longiora; ANTHERÆ flavæ, *fig.* 2.

PISTILLUM: GERMEN ſubovatum, compreſſum; STYLUS breviſſimus; STIGMATA duo, villoſa, patentia, *fig.* 3.

SEMEN minimum, lentiforme, nitidum, ſaturate fuſcum, calyce non penitus tectum, *fig.* 4.

ROOT annual and fibrous.

STALK a foot, two feet or more in height, generally upright, unevenly ſtriated, ſmooth, green, purpliſh, or even very red, ſometimes ſimple, but moſt commonly branched, the lower branches ſpreading and not unfrequently decumbent.

LEAVES ſtanding on footſtalks, ſomewhat fleſhy, ſmooth, naked, veiny on the under ſide, running down the foot-ſtalk, ſinuated, toothed, the ſecond teeth on each ſide from the baſe uſually much larger than the others, all of them ſomewhat pointed, and often edged with red.

LEAF-STALKS long, but ſhorter than the leaves themſelves.

FLOWERS very minute, ſpiked, green, purpliſh, or very bright purple, placed cloſe together, in ſmall roundiſh ſeſſile balls, under each little ball or cluſter is placed a ſmall leaf, longer than the ball itſelf, which gives to the ſpikes a leafy appearance, the little cluſters themſelves are ſometimes obſerved leafy.

CALYX: a PERIANTHIUM of five leaves, which are ovate, concave, ſpreading, membranous on the edge, finally cloſing and containing the ſeed, *fig.* 1.

COROLLA none.

STAMINA: five white FILAMENTS a little longer than the calyx; ANTHERÆ yellow, *fig.* 2.

PISTILLUM: GERMEN ſomewhat ovate, flattened, STYLE very ſhort; STIGMATA two, villous, and ſpreading, *fig.* 3.

SEED very minute, lens-ſhaped, ſhining, of a deep brown colour, not wholly covered by the calyx, *fig.* 4.

We have often had occaſion to remark, that the more common plants, which grow as it were under our feet, are infinitely more difficult to aſcertain than thoſe which are rare; this ariſes in ſome from a deficiency perhaps of ſpecific character, but more from that diverſity of appearance which they aſſume in conſequence of growing in ſoils and ſituations widely different: we have always found ſtudents, and even thoſe well verſed in plants, at a loſs in making out the different ſpecies of Chenopodium, and more eſpecially the preſent ſpecies: and we ſuſpect that LINNÆUS, in his account of it, has in ſome degree contributed rather to obſcure than elucidate it; in his *Flor. Suec. ed.* 2. in deſcribing it, he ſays, *caules decumbentes et terræ appreſſæ;* though this may be true of it when growing in certain ſituations, as in *plateis Stockholmiæ*, it is not generally ſo; on dunghills, which are frequently covered with it alone, and in waſte places that have been overflowed in the winter, ſituations which this plant principally and very generally affects with us; the main ſtem is for the moſt part perfectly upright, as much ſo as that of the *urbicum;* when it grows ſingly in ſoils not very luxuriant, and eſpecially at the cloſe of the year, not only the lower branches are often procumbent, but the whole plant is ſo, and often in a dwarf ſtate; indeed one can ſcarcely imagine two plants more different than the one ſtarving in the ſituation laſt deſcribed, and the other flouriſhing on a rich dunghill, or a moiſt ditch originating near it, where it frequently attains the height of three feet.

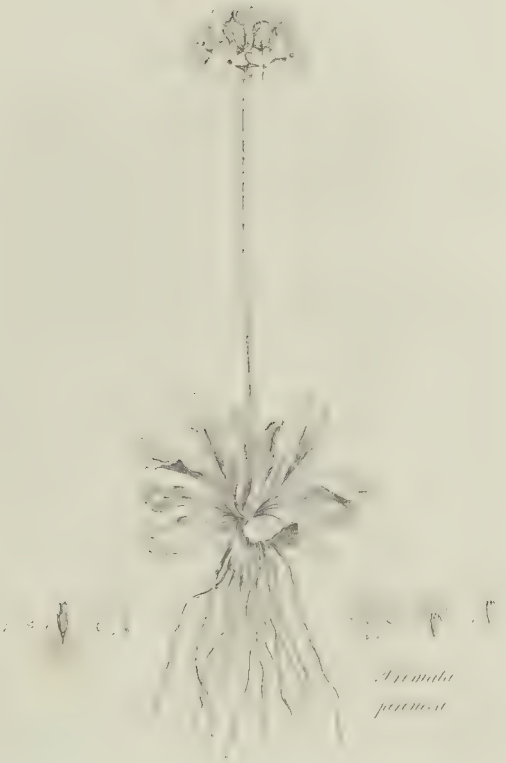
There is another circumſtance which has contributed alſo to render a knowledge of this plant difficult, and that has ariſen from its colour: Botaniſts have not been aware that there are two principal varieties of it, one of a fine purple, which extends ſometimes to the whole plant, and is ſo brilliant as to render it even ornamental, the other pale green without the leaſt tinge of red; and theſe two may generally be found growing near each other.

We have long ſince diſcovered the means of diſtinguiſhing with certainty this plant, under all its appearances, from the *urbicum*, with which it has the greateſt affinity (Mr. HUDSON, indeed, ſuſpected that theſe two plants were varieties only of each other) and that by the difference in the ſize of their reſpective ſeeds; thoſe of the *rubrum* are very minute, not much larger than the largeſt grains of common writing ſand, and thoſe of the *urbicum* are nearly the ſize of rape-ſeed.

To ſee the flowers of this plant, we muſt examine it when very young in Auguſt and September.

Cattle of no kind ſhew any diſpoſition to eat this herb, which is, however, reported to be noxious to ſwine, perhaps, on no good authority: the ſeeds afford abundant food for ſmall birds; agriculturally conſidered, it muſt be regarded as a weed, though not ſo generally troubleſome as ſome of the others of the genus.

Chenopodium rubrum



PRIMULA FARINOSA. BIRD'S-EYE PRIMULA.

PRIMULA. *Linn. Gen. Pl.* PENTANDRIA MONOGYNIA.

Involucrum umbellulæ. *Cor.* tubus cylindricus, ore patulo. *Capſ.* 1-locularis, teres, dentibus 10-dehiſcens, polyſperma.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

PRIMULA *farinoſa* foliis crenatis glabris, florum limbo plano. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 192. *Sp. Pl. ed.* 3. *p.* 205. *Scop. Carn. ed.* 2. *p.* 133. *Hudſ. Fl. Angl. ed.* 2. *p.* 84. *Lightfoot Scot. v.* 1. *p.* 137.

ARETIA foliis glabris, ellipticis, rugoſis, ſubtus farinoſis, floribus umbellatis. *Hall. Hiſt.* 625.

VERBASCULUM umbellatum alpinum minus. *Bauh. Pin.* 247. *Raii Syn. ed.* 3. *p.* 285. Bird's-eye.

PRIMULA veris flore rubro et alb. Red and white Bird eine. *Ger. Herb.* 639. *f.* 1, 2. *emac.* 783. *f.* 1, 2.

PARALYSIS minor flore rubro et albo. *Park. Parad. p.* 246. *Pl.* 243. 10. *Theat. p.* 536. 1, 2.

RADIX perennis, ſubpræmorſa, fibroſiſſima, fibris longis, perpendicularibus; odorata.

FOLIA oblongo-obovata, crenata, glabra, craſſiuſcula, ad margines hinc inde reflexa, ſubtus farinoſa, venoſa.

SCAPUS palmaris ad ſpithamæum, erectus, teres, nudus, pallide virens, farinoſus.

FLORES in umbella erecta, purpurei, ſuaveolentes.

INVOLUCRUM polyphyllum, foliolum ſ bractea ſubulata ad ſingulum pedunculum.

CALYX: PERIANTHIUM monophyllum, perſiſtens, obovatum, pentagonum, quinquefidum, laciniis erectis, obtuſiuſculis, apice ſubconniventibus, obſcure viridibus, farinoſis, *fig.* 1, 2.

COROLLA: monopetala, tubuloſa; TUBUS cylindraceus, calice longior, in medio coarctatus, terminatus collo ſubventricoſo, luteſcente, glabro, fauce pervia, lutea coronata; LIMBUS 5-partitus, patentiſſimus, *fig.* 3.

STAMINA: FILAMENTA quinque, breviſſima, intra collum tubi corollæ; ANTHERÆ erectæ, oblongæ, ſubtrigonæ, conniventes, flavæ, *fig.* 4.

PISTILLUM: GERMEN ſuperum, ſubgloboſum, glabrum; STYLUS filiformis, longitudine tubi; STIGMA globoſum, *fig.* 5.

PERICARPIUM: CAPSULA cylindracea, calyce duplo longior, fuſca, unilocularis, ore quinquedentato, *fig.* 6.

SEMINA plurima, minima, fuſca, *fig.* 7.

ROOT perennial, ſomewhat ſtumped, very fibrous, fibres long, perpendicular; ſweet-ſcented.

LEAVES oblong-obovate, crenated, ſmooth, thickiſh, here and there turned back on the edges, mealy on the under ſide and veiny.

STALK a hand's breadth or ſpan in height, upright, round, naked, of a pale green colour and mealy.

FLOWERS purple, ſweet-ſcented, growing in an upright umbel.

INVOLUCRUM many-leav'd, each leaf or bractea awl-ſhaped and placed at the baſe of each peduncle.

CALYX: a PERIANTHIUM of one leaf, continuing, obovate, five-corner'd, divided into five ſegments, which are upright, a little blunt, cloſing together ſomewhat at their tips, of a dull green colour and mealy, *fig.* 1, 2.

COROLLA: monopetalous, tubular; TUBE cylindrical, longer than the calyx, contracted in the middle, terminating in a neck ſomewhat enlarged, yelloviſh, ſmooth, crowned with a mouth which is open and yellow; LIMB divided into five ſegments ſpreading very flat, *fig.* 3.

STAMINA: five FILAMENTS very ſhort, within the neck of the tube of the corolla; ANTHERÆ upright, oblong, ſomewhat three-cornered, cloſing together and yellow, *fig.* 4.

PISTILLUM: GERMEN above, ſomewhat globular, ſmooth; STYLE filiform, the length of the tube; STIGMA globular, *fig.* 5.

SEED-VESSEL: a cylindrical CAPSULE, twice the length of the calyx, brown, of one cavity, the mouth five-toothed, *fig.* 6.

SEEDS numerous, very minute, and brown, *fig.* 7.

The ſpecies of Primula here figured, called *farinoſa*, from the mealineſs chiefly obſervable on the plant in the ſpring of the year, a native of the more northern parts of Europe, is found abundantly in certain diſtricts of Yorkſhire, and other northern counties of Great-Britain, chiefly in bogs and boggy meadows, in ſome of which it occurs in ſuch profuſion as to empurple them with its bloſſoms.

In its native ſoil, it flowers in July and Auguſt; in our more ſouthern gardens, a month or ſix weeks earlier.

The flowers vary with different ſhades of purple, and they have been found entirely white; in point of ſize, the plant is alſo ſubject to much variation; in a bog in Skirrith-Wood, near Ingleton, we obſerved ſpecimens of it a foot and a half high: in the cultivated plant, we have ſometimes ſeen it have a tendency to be viviparous, to produce one or more tufts of leaves among the flowers of the umbel; in its wild ſtate it ſeeds readily, and frequently when cultivated; towards the end of September its outer leaves fade, and the heart of the plant forms itſelf into a knob, or button, a kind of hybernaculum in which it remains during the winter; in the ſpring it expands, and the leaves then appear wholly white and mealy; the corolla continues to envelope the germen till it has almoſt arrived at maturity, forming a ſort of calyptra to it; the capſule ultimately forms a mouth with five teeth, it ſhould have ten to anſwer ſtrictly to the character of a Primula.

In the neighbourhood of London cultivators ſeldom blow this plant in perfection, and rarely keep it for any length of time; and this juſtifies PARKINSON's obſervation, who long ſince remarked, that it "would "hardly abide any culture:" that it ſhould ſuffer, as it commonly does, from a ſcanty ſupply of water in the ſummer, is not to be wondered at, but that it ſhould be deſtroyed by too much wet in the winter, few would apprehend, *a priori*; ſuch, however, is the fact, as I have too frequently experienced; one winter, indeed, I loſt my whole ſtock from this cauſe, and renewed it by the kindneſs of my friend Mrs. CHORLEY, of Tottenham, niece of the late Dr. FOTHERGILL, who kept the few plants ſhe had in pots, dry, by laying them on their ſides, as is ſometimes practiſed with Auriculas.

To attempt raiſing this plant from ſeed is ſcarcely worth the while, ſince a ſtrong root of it may be divided ſo as to form a great number of others; the beſt time for doing this is in the ſpring, ſoon after its leaves have expanded; each offset ſhould be placed in a ſeparate pot, filled with two parts ſtiffiſh loam, and one part bog-earth of the light ſandy kind, watered and ſet in the ſhade, under a north wall or paling, but not under trees, there they ſhould be kept during ſummer in pans of water; in the autumn, as the wet ſeaſon comes on, they ſhould be taken out of the pans and placed, during the winter, under a common cucumber frame, chiefly for the purpoſe of keeping them from immoderate wet; the next year (if not the ſame) theſe plants will blow ſtrong; and thus they ſhould be treated every year, for Primulas in general require to have their roots frequently parted.

FUMARIA CAPREOLATA. RAMPING FUMITORY.

FUMARIA. *Linn. Gen. Pl.* DIADELPHIA HEXANDRIA.

Cal. diphyllus. *Cor.* ringens. *Filamenta* 2-membranacea, fingula *Antheris* 3.

Raii Syn. Gen. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

FUMARIA *capreolata* pericarpiis monofpermis racemofis, foliis fcandentibus fubcirrhofis. *Linn. Syft. Vegetab. ed.* 14. *Murr. p.* 637. *Sp. Pl. ed.* 3. *p.* 985. *Lightf. Scot. v.* 1. *p.* 380.

FUMARIA *officinalis* var. *Hudf. Fl. Angl. ed.* 2. *p.* 309.

FUMARIA viticulis et capreolis plantis vicinis adhærens. *Bauh. Pin. p.* 143.

FUMARIA major fcandens flore pallidiore. *Raii Syn. ed.* 3. *p.* 204. The greater ramping Fumitory.

FUMARIA flore albo. White flowred Fumitorie. *Ger. Herb. p.* 927. *f.* 2. defcribed with tendrils, but not figured with any.

In the wonderful œconomy of nature, it is found requifite for the well-being of certain plants, that they fhould grow to a conſiderable height above the ſurface of the earth; by far the greater part acquire this height by the ſtrength and firmneſs of their ſtems, which are capable of reſiſting the fury of the elements*; others, leſs robuſt, acquire the neceſſary height, for the moſt part, in two ways: either the ſtem inſtinctively turns round the neighbouring plants, as in the Hop and Bindweed, or they throw out tendrils, which have the faculty of curling round whatever objects they come in contact with, as in the Vine, Cucumber, and many of the leguminous plants:—in the preſent inſtance, there is a deviation from both theſe modes, the ſtalk does not turn as in the Hop, nor does it throw out tendrils as in the Vine; but the leaves themſelves perform the office of tendrils, that is, they curl round whatever objects they touch.

Though the preſent plant, in the colour and form of its leaves and flowers, bears a conſiderable reſemblance to the common Fumitory, yet its greater diſpoſition to climb did not eſcape the obſervation of the older Botaniſts, who regarded it as a ſpecies on that account:—by what particular means it acquired its ſuperior power of aſcenſion, or in what other reſpects it differed from the common Fumitory, they did not inquire into as they ought, or they would not have ſpoken of its diſtinct *viticuli* and *capreoli*; it may be doubted even whether LINNÆUS's term of *ſubcirrhoſis*, together with his deſcription of the leaves in his *Spec. Plant.* (*foliola extrema in cirrhos tranſeunt*) may not tend to miſlead the ſtudent; for though the leaves, or rather their foot-ſtalks, perform the office of tendrils, their form (as far as we have obſerved) undergoes no alteration.

Some modern writers have expreſſed their doubts, as to this plant's being a ſpecies; if it differed only in the particular œconomy of its leaves, we ſhould doubt it alſo; for we have obſerved the common Fumitory, when growing luxuriantly, ſhew a ſimilar tendency in its leaves to lay hold of contiguous objects; and many, we believe, have taken the plant in this luxuriant ſtate, and with this tendency, for the *capreolata*; no wonder they ſhould perceive no difference.

We have long been convinced that the two plants are perfectly diſtinct; the true *capreolata* is much leſs common, and a more local plant than the *officinalis*; its foliage has little of the glaucous appearance in it, but inclines more to yellowiſh-green, and, taking two plants of the ſame age and of the ſame degree of luxuriance, it is much broader and has a much greater tendency to perform the office of tendrils, and, in conſequence of this greater diſpoſition to climb, the plant will aſcend to a much greater height than the *officinalis*, and will frequently ſurmount a low hedge; the difference in the flowers is equally if not more obvious, and this difference is, perhaps, in no reſpect more ſtriking, than in the number of the flowers which form the ſpike; in the *capreolata* they are much fewer than in the *officinalis*, being uſually from ſix to twelve, while in the *officinalis* they are generally twice as numerous; the colour of the flowers exhibits a difference which ſtrikes the eye, perhaps, as ſoon as any other; in the *officinalis*, the main body of the flower is bright red, in the *capreolata* it is fleſh colour; hence the deep red at the extremity of the flowers in the *capreolata* forms a greater contraſt in this ſpecies than in the other:—to theſe diſtinctions, we may add the ſuperior ſize of the flowers of the *capreolata*, which are at leaſt one third larger; the mouth of the flower in the *officinalis* (taking two flowers of the ſame age) is more open, that is the tip of the carina adheres more cloſely to the other parts; in the *capreolata*, this is a good character and conſtant; in the *officinalis*, the peduncle is inſerted more into the middle of the flower; the calyx in the *capreolata* is proportionably broader, and its upper edge riſes higher on the flower, *vid. fig.* 1, 2, where a flower of each is repreſented, that they may be compared together.

We have already obſerved, that this ſpecies is more local than the *officinalis*; it is certainly much more rare in the neighbourhood of London: we remember to have ſeen it ſparingly near Edmonton, and in a few other places; more plentifully about Barnſtaple, in Devonſhire, and elſewhere.

It flowers from June to September, and produces plenty of ſeed, which comes up ſpontaneouſly, and in ſuch abundance as to make it a kind of weed.

* "To loftier forms are rougher taſks aſſign'd,
"The ſheltering oak reſiſts the ſtormy wind."

BARBAULD.

1 2 *Fumaria capreolata*

Saxifraga Hirculus

SAXIFRAGA HIRCULUS. MARSH SAXIFRAGE.

SAXIFRAGA. *Linn. Gen. Pl.* DECANDRIA DIGYNIA.

Cal. 5-partitus. *Cor.* 5-petala. *Capſ.* 2-roſtris, 1-locularis polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAXIFRAGA *Hirculus* foliis caulinis lanceolatis alternis nudis inermibus, caule erecto. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 413. *Sp. Pl. ed.* 3. *p.* 576. *Fl. Suec. ed.* 2. *n.* 370. *Mantiſſ. p.* 383. *Fl. Dan. t.* 200.

SAXIFRAGA *Hirculus* foliis alternis lanceolatis integerrimis acutis nudis, caule adſcendente folioſo. *Hudſ. Fl. Angl. ed.* 2. *p.* 181.

SAXIFRAGA foliis ellipticis caule unifloro. *Hall. Hiſt. n.* 972.

SAXIFRAGIA petalis latiſſimis luteis lineatis. *Hall. Hiſt. t. xi.*

GEUM anguſtifolium auctumnale, flore luteo guttato. *J. R. H.* 252. *Raii. Syn. ed.* 3. *p.* 355.

SEDUM paluſtre luteum bicorne nardi celticæ foliis. *Mor. Hiſt. Ox. III.* 477. *ſ.* 12. *t.* 8. *f.* 5.

HIRCULUS friſicus Dortmanni. *Cluſ. Cur. poſt.* 5.

CHAMÆCISTUS friſicus foliis Nardi celticæ. *Bauh. Pin. p.* 466.

CHAMÆCISTUS Friſicus. Friſian Dwarfe Ciſtus. *Ger. Em. p.* 1284. *fig.* 8. *Park. Th. p.* 656. *f.* 3.

RADIX perennis, fibroſa.

ROOT perennial, and fibrous.

CAULIS ſubſpithamæus, erectiuſculus, ſimplex, folioſus, teres, ſub-biflorus, pilis raris flexuoſis fuſceſcentibus veſtitus.

STALK about a ſpan high, nearly upright, ſimple, leafy, round, ſupporting uſually about two flowers covered with browniſh hairs, crooked, and few in number.

SURCULI radicales folioſi, procumbentes, radiculas promentes.

SHOOTS from the root leafy, procumbent, putting out fibres.

FOLIA ſparſa, inferne magis conferta, ſuberecta, ſeſſilia, ad baſin tuberculo inſtructa, lineari-lanceolata, obtuſiuſcula, lævia, integerrima, craſſiuſcula, pilis raris caulinis ſimillimis ciliata.

LEAVES growing irregularly, more crowded below, nearly upright, ſeſſile, furniſhed with a ſmall tubercle at the baſe, betwixt linear and lanceolate, ſomewhat blunt, ſmooth, perfectly entire, thickiſh, edged with hairs like thoſe on the ſtalk.

FLORES flavi, majuſculi, priuſquam aperiuntur nutantes.

FLOWERS yellow, large, nodding before they open.

CALYX: PERIANTHIUM 5-phyllum, foliolis ovato-oblongis, obtuſis, pilis caulium ſimilibus ciliatis, concaviuſculis, demum reflexis.

CALYX: a PERIANTHIUM of five leaves, which are ovato-oblong, obtuſe, edged with hairs like thoſe on the ſtalk, ſomewhat concave, finally reflexed.

COROLLA: PETALA quinque obovata, flava, calyce multo longiora, ſubnervoſa, gibberibus duobus acuminatis ad baſin inſignita, punctiſque numeroſis aurantiacis ad medium uſque maculata.

COROLLA: five PETALS obovate, yellow, much longer than the calyx, ſomewhat ribbed, each characteriſed by two pointed tubercles at its baſe, and marked with numerous orange-coloured ſpots from the middle downwards.

STAMINA: FILAMENTA decem, ſubulata, flava, erecta, alterna breviora, perſiſtentia; ANTHERÆ flavæ, compreſſæ, biloculares, loculis demum inferne divergentibus.

STAMINA: ten FILAMENTS, tapering, yellow, upright, the alternate ones ſhorteſt, continuing; ANTHERÆ yellow, flattened, bilocular, the cavities finally diverging below.

PISTILLUM: GERMEN oblongum, majuſculum, bifidum; STIGMATA duo, plana, villoſa, inſidentia.

PISTILLUM: GERMEN oblong, rather large, bifid; STIGMATA two, flat, villous, ſitting on the germen.

PERICARPIUM: CAPSULA præter morem grandis.

SEED-VESSEL: a CAPSULE larger than in the other ſpecies of this genus.

Though the preſent ſpecies of Saxifrage is extremely rare in this country, and altogether local, it is found in various parts of Europe, as in Sweden, Switzerland, Lapland, and Siberia, and always in bogs: according to RAY, it was firſt diſcovered on Knutsford-Moor, Cheſhire, by Dr. KINGSTON; upwards of twenty years ſince, Mr. HOWARD, Surgeon, of Knutsford, ſent me roots of it, the produce of which I ſtill retain; and lately I received an account of it, accompanied with a drawing, from Mr. BENJAMIN HALEY, Gardener to ——— EGERTON, Eſq. Tatton-Park, near Knutsford.

It is ſo very different from all the European Saxifrages, that there is ſcarcely a poſſibility of its being miſtaken for any of them, yet it has been confounded with the *autumnalis*, from which it obviouſly differs in the ſuperior ſize and form of its petals, the lower half of which is beautifully ſpotted with orange, and towards the baſe of each are two very ſingular pointed projections (*vid. fig.* 1.) which ſhews a petal magnified.

Perſons not converſant with botanical names, are apt to affix a different meaning to its trivial name (*Hirculus*) to what it imparts; *Hirculus* ſignifies a little goat, and has been applied by ſome of the old Botaniſts to the *Valeriana celtica*, which the preſent plant reſembles in its foliage.

As this plant, when properly treated, blows freely, and is very ornamental, we ſhall give a few directions for its culture, and thoſe indeed may be compriſed in a ſmall compaſs, it being one of thoſe plants that will live, if not egregiouſly neglected; all that is neceſſary, is to place a root of it in a pot of bog earth, and keep the pot in a pan of water, ſo that the earth ſhall be conſtantly moiſt; in the winter it will be proper to ſet the pot and pan under a frame, to guard againſt ſevere froſt; or the plant will thrive very well in the open border (if moiſt, and formed chiefly of bog earth) and throw out ſhoots, which will take root and afford abundance of increaſe; the plant alſo may be increaſed by cuttings of the ſhoots, which will ſtrike root if put under a cloſe glaſs towards the cloſe of the ſummer; if the plant be kept in a pot, it will be neceſſary to renew it once in two or three years.

PULMONARIA MARITIMA. SEA LUNGWORT.

PULMONARIA. *Linn. Gen. Pl.* PENTANDRIA MONOGYNIA.
Cor. infundibuliformis fauce pervia. *Cal.* prismatico 5-gonus.
Rai Syn. Gen. 13. HERBÆ ASPERIFOLIÆ.

PULMONARIA *maritima* calycibus abbreviatis, foliis ovatis caule ramoso procumbente. *Linn. Syst. Vegetab. ed.* 14. *Murr. p.* 187. *Sp. Pl. ed.* 3. *p.* 195. *Hudf. Fl. Angl. ed.* 2. *p.* 81. *Lightf. Scot. v.* 1. *p.* 134. *t.* 7. *Fl. Dan. t.* 25.

CERINTHE maritima procumbens. *Dill. Herb. Elth. t.* 65.

CYNOGLOSSUM procumbens glaucophyllum maritimum noſtras, floribus purpuro cæruleis, ſeminibus lævibus. *Pluk. Alm. p.* 126. *t.* 172. *f.* 3.

CYNOGLOSSUM perenne maritimum procumbens. *Moriſ. Hiſt.* 3. *p.* 450. *ſ.* 11. *t.* 28. *f.* 12.

ECHIUM marinum. *P. B. Cat. Ang. Sibb. Sc. Ill. P. II. L.* 3. *p.* 55. *Tab.* 12. *Raii Syn. Ed.* 3. *p.* 228. Sea Bugloſs.

BUGLOSSUM dulce ex Inſulis Lancaſtriæ. Lancaſhire Bugloſſe. *Park. Th. p.* 767. *t.* 766. *f.* 5.

RADIX perennis, lignoſa, nigricans.
CAULES plures, procumbentes, pedales et ultra, teretiuſculi, folioſi, ſuperne ramoſi.
FOLIA numeroſa, ſparſa, ſeſſilia, obovata, acuta, baſi anguſtata, integerrima, ſubtus nervoſa, undulata, apicibus ſæpius recurvis, ſuperne punctis prominulis exaſperata.

PEDUNCULI teretes, ad flores ſubincraſſati, verruculoſi.
CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis ovatis, acutis, integerrimis, carinatis, *fig.* 1.
COROLLA monopetala, infundibuliformis, infra medium coarctata, quaſi vincula ligata fuiſſet; *Tubus* brevis, latus, longitudine calycis: *Limbus* quinquefidus laciniis reflexis, faux pervia, gibbis quinque intruſis luteſcentibus, *fig.* 2.
STAMINA: FILAMENTA quinque, fundo corollæ inſerta, ſubulata, convergentia, tubo corollæ paulo longiora; ANTHERÆ oblongæ, lutæ, incumbentes, *fig.* 3.
PISTILLUM: GERMINA quatuor; STYLUS filiformis, longitudine ſtaminum; STIGMA ſimplex, *fig.* 4.
PERICARPIUM nullum.
SEMINA quatuor, conniventia, trigona, acuta, lateri exteriori convexa, interioribus planis, *fig.* 5.

ROOT perennial, woody, of a blackiſh colour.
STALKS numerous, procumbent, a foot or more in length, nearly round, leafy, branched above.
LEAVES numerous, placed without order, ſeſſile, obovate, pointed, narrowed at the baſe, perfectly entire, ribbed on the under ſide, waved, the point moſt commonly bent back, the upper ſurface rough with fine prominent points.
PEDUNCLES round, a little thickened next the flowers, and ſomewhat warty.
CALYX: a PERIANTHIUM of five leaves, continuing, leaves ovate, pointed, perfectly entire, and keeled, *fig.* 1.
COROLLA monopetalous, funnel-ſhaped, contracted below the middle, as if it had been tied round with a ligature; *Tube* ſhort, wide, the length of the calyx; *Brim* divided into five ſegments, which are bent back, the throat open, with five yelloviſh tubercles, *fig.* 2.
STAMINA: five FILAMENTS, inſerted into the bottom of the corolla, converging, a little longer than the tube of the corolla; ANTHERÆ oblong, yellow, incumbent, *fig.* 3.
PISTILLUM: GERMINA four; STYLE filiform, the length of the ſtamina; STIGMA ſimple, *fig.* 4.
SEED-VESSEL none.
SEEDS four, cloſing together, three-cornered, pointed, the outer ſide convex, the two innermoſt flat, *fig.* 5.

The *Pulmonaria maritima* is found abundantly on many parts of our ſea-coaſts, yet not generally; like the *Crambe maritima*, it has its local attachments*.

Its roots, which are perennial, ſtrike deeply into the ſand, or among the pebbles, and it is probable that by this means the plant may be preſerved in very ſevere ſeaſons; Mr. LIGHTFOOT regards it as one of the moſt beautiful of our Britiſh plants, ſuch it undoubtedly is, and on that account highly deſerving of culture; yet we rarely find it in the gardens of the curious, and this we attribute to its culture not being well underſtood; we have taken much pains to have this plant in perfection, and, having ſucceeded, recommend the following mode.

If your plant has been taken proper care of, it will produce abundance of ſeeds, moſt of which will be ripe by the end of Auguſt; gather them as they ripen, for if you ſtay till thoſe from the laſt-blown flowers are fit, thoſe from the firſt will have fallen out of the flower-cups; ſow them either early in September or the enſuing February, in a pot of earth compoſed of three parts ſea ſand (or, in lieu thereof, common ſand) and one part rotten cow dung, finely ſifted; in about ſix weeks or two months from the February ſowing theſe ſeeds will vegetate, and in the Autumn the plants will be fit to tranſplant into ſeparate pots, and moſt of them will flower the enſuing year; ſnails and ſlugs are uncommonly fond of this plant; if you, therefore, plant it in the open border, it will in all probability be deſtroyed; for theſe animals not only devour the plant when fully green, but eat out the buds on their firſt appearance; ſo that you loſe your plants without knowing the cauſe: having them in pots, you can guard them better from their ravages; ſet them with your green-houſe plants, and treat them as ſuch, they will not diſgrace your collection; water them over the leaves as little as may be, for the water is apt to ſettle on them in drops, and to leave marks which greatly diſfigure them.

RAY refers to PARKINSON's figure of this plant with a query; though a very rude one, it is undoubtedly intended for it; of the ſeveral figures publiſhed ſince, that of DILLENIUS is certainly the beſt, though deficient in expreſſing its habit.

From the appearance of the foliage, one would not be induced to place it with the *aſperifoliæ;* a magnifying glaſs, however, ſhews on many parts of it a manifeſt roughneſs; much leſs would we ſuſpect that poiſon lurked under ſuch an elegant form, yet the reſpectable teſtimony of Dr. BLAIR fully confirms it; the following account is taken from his *Miſcellaneous Obſervations, p.* 55.—"I am credibly informed by a gentleman not far from "hence, that in the late famine, one of his farmers being ſtraitned for bread, taking this plant for Colewort "(to which it is not unlike in colour) ordered to boil a diſh of it, and gave it to his wife and children, with "the ſervants in his family; all of them became very ſick, ſome vomited exceſſively, others ſlept two or three "days without intermiſſion, and one or two of them died."

* Mentioned by RAY as growing at *Scrunmerſton-Mill*, between the *Salt Pans* and *Bruntſ*, on the ſea beach, about a mile and a half from *Berwick*; alſo near *Whitehaven* in *Cumberland*, and againſt *Bigger* in the *Iſle of Walney* in *Lancaſhire*, plentifully, Mr. LAWSON; (near *Trefarthen* in *Anglеſea*, and in abundance by the river *Uſwi* in the way from *Dinardindle* to *Clynog* in *Carnarvonſhire*, Mr. LLWYD;) in ſeveral places along the ſouth ſide of the *Firth of Forth*, Dr. SIBBALD; on the ſea-coaſt of Scotland not unfrequent, growing out of ſtony beaches which ſeem incapable of affording vegetation, as on the coaſt of *Fife*, near *St. Andrews*, &c. in the *Iſle of Bute*, upon a ſandy ſhore in *Arran*, at *Loch Ruſa*, at the *Lamlaſh*, at *Kilmarkill*, and at *Catacgan* in *Invernaſſhire*, LIGHTFOOT *Scot.* at the ferry on the ſea ſhore near *Inverneſs*, in great plenty, Mr. DICKSON.

Solanum nigrum.

Cistus guttatus

Cistus Guttatus. Spotted-Flowered Cistus.

CISTUS. *Linn. Gen. Pl.* Polyandria Monogynia.

Cor. 5-petala. *Cal.* 5-phyllus: foliolis duobus minoribus. *Capſula.*

Raii Syn. Gen. 24. Herbæ pentapetalæ vasculiferæ.

CISTUS *guttatus* herbaceus exſtipulatus, foliis oppoſitis lanceolatis trinerviis, racemis ebracteatis. *Linn. Syſt. Vegetab. ed.* 14. *Murr. p.* 499. *Mant.* 403.

CISTUS annuus, foliis radicalibus oppoſitis, lanceolatis trinerviis, ramiferis ternatis linearibus. *Saut. Monſp.* 148.

CISTUS foliis oblongo-acuminatis non ſtipulatis caule florali racemoſo. *Guett Stamp.* 2. *p.* 181. *Dalib. Pariſ.* 158.

CISTUS flore pallido punicante macula inſignito. *C. B. Pin.* 465.

TUBERARIA minor Myconi. *Lugd.* 1099.

CISTUS annuus II. *Cluſ. Hiſt.* 1. *p.* 77.

CISTUS annuus flore maculato. *Ger. emac.* 1281. *f.* 19. Spotted annual Ciſtus.

CISTUS annuus flore guttato. Spotted annual Ciſtus. *Park. Th. p.* 661.

HELIANTHEMUM flore maculoſo. *Col. Ecphr. II.* 78. *t.* 77.

Tota planta gratum odorem ſpirat, preſertim flores.

RADIX annua.

CAULIS ſemipedalis ad pedalem, erectus, ramoſus uſque ad baſin, teres, hirſutulus, viſcoſus.

FOLIA oppoſita, connata, inferiora lanceolata, obtuſiuſcula, punctis prominulis ſcabriuſcula, trinervia, hirſutula, ſuperiora lanceolato-linearia.

FLORES racemoſi, pedunculati, lutei, caduci, bracteati, et ebracteati, idque in eodem racemo; *Pedunculi* teretes, viſcoſi, ante floreſcentiam nutantes, pendente floreſcentia erecti, peracta floreſcentia reflexi, ſeminibus demiſſis iterum eriguntur.

CALYX: Perianthium pentaphyllum, perſiſtens, foliolis tribus majoribus ovatis, acutis, concavis, viſcoſis, hirſutis, glandulis atro-purpureis punctatis, peracta floreſcentia convergentibus; duobus minoribus lanceolatis, ciliatis, patentibus, *fig.* 1.

COROLLA: Petala quinque, obovata, lutea, macula purpurea ad baſin notata, inæqualiter circumſerrata, *fig.* 2.

STAMINA: Filamenta plurima; Antheræ flavæ, *fig.* 3.

PISTILLUM: Germen ſubrotundum; Stylus nullus; Stigma magnum, flavum, villoſum, *fig.* 4.

PERICARPIUM: Capsula trivalvis, valvis ovatis, concavis marginibus ad lentem ciliatis, *fig.* 5.

SEMINA plurima, minima, pallida, interno parieti valvarum per fila affixa, *fig.* 6.

The whole plant diffuſes a pleaſant odour, eſpecially the flowers.

ROOT annual.

STALK from ſix inches to a foot in height, upright, branched quite to the bottom, round, ſlightly hairy, and viſcid.

LEAVES oppoſite, connate, the lowermoſt lanceolate and ſomewhat blunt, the ſurface rough with little prominent points, three-ribbed, ſlightly hirſute, the uppermoſt lanceolato-linear.

FLOWERS growing in racemi, ſtanding on foot-ſtalks, yellow, deciduous, with and without bracteæ, and that on the ſame racemus; *Peduncles* round, viſcous, drooping before the bloſſoms open, upright during their expanſion, turning back again when the flowering is over, and again becoming upright on the ſhedding of the ſeed.

CALYX: a Perianthium of five leaves, continuing, the three larger leaves ovate, pointed, concave, viſcous, hirſute, dotted with glands of a blackiſh purple colour, cloſing together when the flowering is over; the two ſmaller leaves lanceolate, edged with hairs, and ſpreading, *fig.* 1.

COROLLA: Petals five, obovate, yellow, marked with a yellow ſpot at the baſe, the edge irregularly indented, *fig.* 2.

STAMINA: Filaments numerous; Antheræ yellow, *fig.* 3.

PISTILLUM: Germen roundiſh; Style none; Stigma large, yellow, and villous, *fig.* 4.

SEED-VESSEL: a Capsule of three valves, the valves ovate, concave, the edges fringed when magnified, *fig.* 5.

SEEDS numerous, very ſmall, of a pale colour, affixed by threads to the inſide of the valves, *fig.* 6.

This very diſtinct ſpecies of Ciſtus, is firſt enumerated as a Britiſh plant in Ray's *Synopſis*, where it is deſcribed on the authority of Dr. Sherard, as growing in the Iſle of Jerſey, on the weſt ſide, near Groſnez-Caſtle; and is further mentioned, on the authority of Mr. Brewer, in Mr. Hudson's *Flora Anglica*, as being found in the Iſle of Man; in ſandy paſtures on Llech ddue, near Holyhead; in France, Spain, and Italy, it occurs more frequently.

Both this Ciſtus and the *ſalicifolius* are annuals, in which reſpect they differ from all the other Britiſh ſpecies; from each other they are diſtinguiſhed by ſeveral characters, none of which are more obvious than the diſproportionate ſize of their reſpective ſeed-veſſels. Several peculiarities attend on this ſpecies, ſome of which have eſcaped the obſervations of authors; the ſpots on the petals have been generally noticed, they contribute to render the flowers a pretty ornament; on the lower part of each of the larger leaves of the calyx one perceives numerous black glands, interſperſed among the hairs, viſible to the naked eye, and very conſpicuous when ſomewhat magnified; Clusius, who found this plant in Spain, deſcribes it as covered with a ſort of glutinous exudation; we have not perceived much of this, but we have found the whole plant diffuſe a moſt delightful fragrance, more eſpecially the flowers, and flower cups; this odoriferous matter, we apprehend, chiefly reſides in the black glands we have mentioned.

In the middle of ſummer, the uſual time of its flowering, when the mornings are long, and the ſolar rays powerful, the petals of this ſpecies will frequently fall off before nine o'clock; towards Autumn, we have obſerved them continue till noon; immediately on their falling, the three larger leaves of the calyx cloſe together over the ſtamina, and piſtillum, and ſecure them from any injury they might be liable to ſuſtain from the early loſs of their more delicate covering.

This plant is propagated without difficulty, it produces abundance of ſeeds, which readily grow; ſow them in a pot of earth, in the Autumn; guard the ſeedlings, which will be ſmall, againſt injuries during the Winter, and your plants will flower early the enſuing Summer; ſhould your autumnal crop fail, ſow again in the Spring, your plants will flower in the Summer, but later.

Has been obſerved by authors to vary with flowers without ſpots.

CERASTIUM TETRANDRUM. TETRANDROUS CERASTIUM, or MOUSE-EAR CHICKWEED.

CERASTIUM. *Linn. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* 2-fida, *Capſ.* 1-locularis apice dehiſcens.

Linn. Syſt. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM [illegible] caule diffuſo dichotomo, floribus pleriſque tetrandris, capſula calycem vix [illegible]. Lapeyrouse.

SAGINA [illegible] caule diffuſo dichotomo, foliis ſpatulatis obovatiſve recurvis, pedunculis fructiferis [illegible]. *Smith. Transf. Linn. Soc. v. 2. p. 343.*

RADIX annua, fibroſa.

CAULES plures, palmaris et ultra, diffuſi, teretes, villoſi, ſubviſcidi, purpuraſcentes, dichotomi, [illegible].

FOLIA oppoſita, ſeſſilia, ſubconnata, patenti-recurvata, integerrima, hirſutula, ſubtus pallidiora et minus hirſuta, inferiora ovato-lanceolata, ad baſin anguſtiora, ſuperiora ovata, acuta.

FLORES tetrandri et pentandri in eadem planta, plerique vero tetrandri, ſolitarii, e dichotomia caulis, pedunculati.

PEDUNCULI filiformes, viſcidi, ad baſin tumidi, poſt floreſcentiam reflexi, maturato ſemine ſub-erecti.

CALYX: PERIANTHIUM 4-5 phyllum, perſiſtens, foliolis lanceolatis, acuminatis, hirſutulis, viſcidis, duobus paulo anguſtioribus, margine [illegible].

COROLLA PETALA 4-5, calyce breviora, alba, nitidula, unguibus flaveſcentibus, ſtriata, bifida, lobis rectis, acutiuſculis, *fig.* 2.

STAMINA: FILAMENTA 4-5, ſubulata, alba, longitudine ſtylorum; ANTHERÆ luteſcentes, *fig.* 3.

PISTILLUM: GERMEN turbinatum, læve, vireſcens; STYLI 4-5, erecti, albi, villoſuli; STIGMATA obtuſa, *fig.* 4.

PERICARPIUM: CAPSULA oblonga, calyce paulo longior, 8-10 dentata, *fig.* 5, 6.

SEMINA plurima, minuta, fuſca, *fig.* 7, 8.

ROOT annual, and fibrous.

STALKS numerous, about ſix inches in length, ſpreading on the ground, round, villous, with ſome viſcidity, purpliſh, dichotomous, and very much branched.

LEAVES oppoſite, ſeſſile, ſomewhat connate, ſpreading, bending back, perfectly entire, ſlightly hirſute, paler, and leſs hairy on the under ſide, the lowermoſt ovato-lanceolate, the uppermoſt ovate, and pointed.

FLOWERS tetrandrous and pentrandrous in the ſame plant, but moſtly tetrandrous, ſolitary, from the fork of the ſtalk, on peduncles.

PEDUNCLES filiform, viſcid, tumid at the baſe, when the flowering is over bent back, when the ſeed is ripened becoming upright.

CALYX: a PERIANTHIUM of four or five leaves, continuing, leaves lanceolate, acuminate, ſlightly hirſute, viſcid, membranous on the edge, two of them ſomewhat narrower than the others, *fig.* 1.

COROLLA: PETALS four or five, ſhorter than the calyx, white, a little gloſſy, claws yellowiſh, ſtriated, bifid, the lobes ſtraight, a little pointed, *fig.* 2.

STAMINA: FILAMENTS four or five, ſubulate, white, the length of the ſtyles; ANTHERÆ yellowiſh, *fig.* 3.

PISTILLUM: GERMEN top-ſhaped, ſmooth, greenish; STYLES four or five, upright, white, ſomewhat villous; STIGMATA blunt, *fig.* 4.

SEED-VESSEL: an oblong CAPSULE, a little longer than the calyx, having eight or ten teeth, *fig.* 5, 6.

SEEDS numerous, minute, and brown, *fig.* 7, 8.

As the preſent plant, in its general habit and ſtructure, ſo obviouſly proclaims itſelf to be a *Ceraſtium*, we were ſurpriſed to find that the Preſident of the Linnæan Society had regarded it as a *Sagina*, a genus to which it has very little affinity, except in the number of its petals, ſtamina, and ſtyles; ſuppoſing it to be always found, as he aſſerts it is to be, with *floribus quadrifidis*, or, as would have been perhaps more ſcientifically expreſſed, *floribus tetrapetalis*; but admitting the fact to be ſo, which it is not in reality, a difference merely in the number of its parts ſurely would not make it the leſs a *Ceraſtium*; if it would, the *ſemidecandrum* and *pumilum*, already figured in this work, would not be ſuch, as they have only half their proper number of ſtamina: that the ſpecimens which Dr. SMITH examined were all tetrandrous we readily believe, and have no doubt but we ſhall obtain equal credit when we aſſert, that in the living plant from whence our drawing was made, nearly the fourth part of the flowers were pentandrous; in the form and ſtructure of the ſeed-veſſel, a part which forms the ſtriking character of a *Ceraſtium*, *vid.* GÆRTNER, our plant is not deficient, and the ſeeds (when magnified) correſpond in form with all the others of the genus, *vid. fig.* 8.

The flowers of this plant expand, as the influence of the ſun is more or leſs powerful, without any regard to the particular time of the day; after they have been prevented from opening by a wet cloudy day, we have ſeen them expand partially on the ſun's ſhining on them ſo late as ſeven in the evening: its peduncles, as in *Alpine*, *Holoſtea*, and ſome others of the *Ceraſtiums*, bend back when the flowering is over, and become erect as the ſeed ripens.

Beſides the difference in the number of its ſtamina, this plant differs from *ſemidecandrum* and *pumilum*, in being much larger, and more procumbent; in the latter character it differs wholly from *viſcoſum*, to which it has ſome affinity, in the breadth of its foliage; the mouth of the capſule opens uſually with eight teeth, the flower, which has five petals, is found with ten; thoſe teeth, when magnified, appear ſomewhat truncated, and their edges turn back, *vid. fig.* 6

Mr. DICKSON, the fortunate diſcoverer of *Ceraſtiums*, found this plant growing abundantly on the Iſland of Inch-Keith in the Firth of Forth, and on the ſea-ſhore below Preſton-Pans; it is not likely that this ſpecies, or the *pumilum*, ſhould be confined within the narrow limits of growth which we at preſent aſſign them; as the ſeveral ſpecies are more minutely attended to, they will (we may venture to predict) be foundb aundantly elſewhere.

It flowers in May and June, and grows readily from ſeeds, which ſhould be ſown in Autumn.

Cerastium tetrandrum

Poa prostrata

POA PROCUMBENS. PROCUMBENT MEADOW-GRASS.

POA. *Linn. Gen. Pl.* TRIANDRIA DIGYNIA.
Cal. 2-valvis multiflorus. *Spiculæ* ovatæ, valvis margine ſcariofis acutiuſculis.
Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ, FLORE IMPERFECTO CULMIFERÆ.
POA *procumbens* culmis inflexo-procumbentibus, panicula ſecunda rigida; ſpiculis ſublinearibus, ſubquinqueflоris; floſculis obtuſis baſi piloſis.

RADIX perennis, fibroſa.
CULMI plures, palmares, ſemipedales et ultra, bi, trinodes, plerumque procumbentes, folioſi, læves, ſuperne compreſſi.

FOLIA glauca, brevia, lineas duas lata, lineata, ad lentem punctis diaphanis ſubaſperis confertis utrinque adſperſa, margine minutiſſime ſerrulata; *Ligula* brevis, amplexicaulis, alba, acutiuſcula; *Vagina* foliorum intus nitida, extus ſuperficies eadem ut in foliis.

FLORES paniculati.
PANICULA ſubbiuncialis, rigida, ſubovata, deorſum ſubinde flexa, ſubſecunda, ramoſa, ramis binatis inæqualibus, exteriore majore, ſpicula ſimplici in ramis inferioribus plerumque medio inter ramos poſita, in ſpecimínibus minus luxuriantibus ſpicula locum ramuli obtinet.

PEDUNCULI communes, teretes, nudi, flexuoſi, ſubſtantia glanduloſa ad baſin ſuperne notata.

RACHIS teres, lævis, interne biſulca.

SPICULÆ in ramis majoribus ſex circiter, in minoribus quatuor, ſeſſiles, ſubquinqueflоræ, ſublineares, compreſſo-teretiuſculæ, æquidiſtantes.

FLOSCULI obtuſi, ad baſin piloſi.
CALYX: *Gluma* bivalvis, valvulis inæqualibus, viridibus, albo marginatis, obtuſiuſculis, *fig.* 1.

COROLLA: *Gluma* bivalvis, valvis ſubæqualibus, exteriore majore quinquenervi, interiore anguſtiore binerve, nervis ciliatis, *fig.* 2.

STAMINA: FILAMENTA tria capillaria; ANTHERÆ oblongæ, flavæ, *fig.* 3.
PISTILLUM: GERMEN obovatum, pallide virens; STYLI duo, patentes ad baſin uſque ramoſi, *fig.* 5.
NECTARIUM: *Glumulæ* duæ, diaphanæ, baſi tumidæ carnoſæ, germine paulo longiores, *fig.* 4.

SEMEN oblongum, læve, glumis incluſum, *fig.* 6.

ROOT perennial, and fibrous.
STEMS many, from four to ſix inches or more in length, having two or three joints, for the moſt part procumbent, leafy, ſmooth, flattened towards the panicle.
LEAVES glaucous, ſhort, two lines broad, ſcored, when viewed with a magnifier appearing to be thickly covered with roughiſh tranſparent dots, the edge very minutely ſawed; *Membrane* ſhort, embracing the ſtalk, white, ſomewhat pointed; *Sheath* of the leaves gloſſy on the inſide, the ſurface on the outſide the ſame as that of the leaves.
FLOWERS in a panicle.
PANICLE about two inches long, rigid, ſomewhat ovate, and now and then bent a little backwards, turning chiefly to one ſide, branched, the branches growing in pairs, unequal, the outer one largeſt, in the lower branches a ſingle ſpicula is moſt commonly placed in the middle betwixt them, in impoveriſhed ſpecimens a ſpicula often holds the place of a branch.
PEDUNCLES: the common peduncles round, naked, crooked, marked at the baſe on the upper ſide with a glandular kind of ſubſtance.
RACHIS round, ſmooth, with two grooves on the inſide.
SPICULÆ in the larger branches about ſix in number, in the ſmaller ones four, ſeſſile, containing about five flowers, ſomewhat linear, roundiſh, ſlightly flattened, placed at equal diſtances from each other.
FLORETS obtuſe, hairy at the baſe.
CALYX: a *Glume* of two valves, the valves unequal, green, edged with white, and ſomewhat blunt, *fig.* 1.
COROLLA: a *Glume* of two valves, the valves ſomewhat equal, the outer one largeſt and five-ribbed, the inner one narroweſt and two-ribbed, the ribs edged with hairs, *fig.* 2.
STAMINA: three capillary FILAMENTS; ANTHERÆ oblong, and yellow, *fig.* 3.
PISTILLUM: GERMEN obovate, of a pale green colour; STYLES two, ſpreading and ramified quite to the baſe, *fig.* 5.
NECTARY: two ſmall tranſparent *Glumes*, tumid and fleſhy at the baſe, a little longer than the germen, *fig.* 4.
SEED oblong, ſmooth, encloſed in the glumes, *fig.* 6.

In the Autumn of 1793, having occaſion to be at Briſtol, I ſpent great part of a day in examining the plants of the famous St. Vincents Rock, aſcending Clifton-Wells: and at the foot of the rock, on the edge of the river Severn, I obſerved a tuft of graſs, with a few panicles of ripe ſeed on it, aſſuming a different appearance to any graſs I had been accuſtomed to ſee: I ſought for more of it about the ſame ſpot, but without ſucceſs; flattering myſelf that it might turn out to be a new ſpecies, I took up the only root there was, and gathered the ſeeds, planting the one, and ſowing the other, in my garden at Brompton; the next ſeaſon it flowered with me, and gave me an opportunity of diſcovering that it was a ſpecies of Poa, perfectly diſtinct from all our others.

In its general habit it comes near to *Poa annua*, it bears an affinity alſo to *Poa Aquatica*; but from both thoſe, as well as from all our other Poas, it is diſtinguiſhed by many curious and intereſting particulars.

One of the moſt ſtriking characters of this graſs is to have its ſtalks for the moſt part procumbent; but this procumbence, if we may be allowed the expreſſion, does not appear to originate in the uſual way, from the weakneſs of the ſtalk, but from its being bent downward at a joint near its baſe; as every ſtem is not thus acted on, ſome of them are frequently found nearly upright: the foliage of this plant is of a glaucous hue, and, if examined with a magnifier, is found to be covered with numerous rough particles of a ſilvery hue; the panicle has a greater degree of rigidity than that of *Poa annua*, the ſpiculæ are much longer, leſs flat, and more regularly diſtant from each other, and each floret is *articulated at its baſe*; ſuch are the moſt obvious differences; many others may be diſcovered from an attention to the deſcription.

Not ſatisfied with having found a ſingle ſpecimen of this plant, we delayed publiſhing this account, hoping that it might be found more abundantly elſewhere; in the beginning of Auguſt an opportunity of making this diſcovery fortunately preſented itſelf.

Sir THOMAS FRANKLAND, an early and warm encourager of the *Flora Londinenſis*, which in many points has been improved by his friendly and judicious obſervations, ſent me, from Clifton (where he then was on a viſit) ſome ſeeds and ſpecimens of plants gathered near that ſpot; I immediately wrote to him, and encloſing a ſpecimen of my Poa, requeſted him to ſearch for it; on the 7th of the ſame month I received a letter from him, containing ſpecimens of the ſame graſs, with the following deſirable information: "I had fortunately noticed "the graſs you encloſed in your letter, which grows in ſome plenty in the inundated parts of the waſte "ground weſt of the wet dock, below Clifton; it ſeemed moſt like *Poa rigida*, its habit was new to me, and I "ſuppoſed it a variety of that graſs." In a letter afterwards, Sir THOMAS informs me, that he had found the ſame graſs abundantly on the Pier at Scarborough; and we have lately been informed, that it has been found on the Eſſex Coaſt.

Culture produces little alteration in its appearance: it grows readily from ſeed, and flowers during moſt of the Summer: from the ſame root, which is clearly perennial, we have, as in *Poa annua*, young ſhoots and ripe ſeeds.

AGROSTIS SETACEA. SHEEP'S FESCUE-LEAVED AGROSTIS.

AGROSTIS. *Linn. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, 1-florus, corolla paulo minor. *Stigmata* longitudinaliter hiſpida.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

AGROSTIS *ſetacea* foliis ſetaceis, culmo erecto.

AGROSTIS *canina* v. γ foliis ſetaceis rigidis glaucis, culmo erecto. *Hudſ. Fl. Angl. ed.* 2. *p.* 31.

AVENA *monantha*, paniculata, foliis ſetaceis, gluma calycina exaſperata; ariſta flore duplo longiore. *Hall. Hiſt. n.* 1478.

GRAMEN parvum paniculatum alpinum panicula ſpadicea ariſtatum. *Scheuchz. Agroſt. p.* 140. 1. *Prod. p.* 22. *t.* iv.

AGROSTIS *alpina*. *Diagn.* unum petalum truncatum aut bifidum, e baſi promit ariſtam baſi recurvatum. *Scop. Fl. Carn. ed.* 2. *p.* 61.

RADIX perennis, fibroſa.

ROOT perennial, and fibrous.

FOLIA radicalia numeroſa, faſciculata, glauca, rigidula, ſetacea; teretiuſcula, hinc ſulcata, baſi vaginis incluſa, ligula alba, erecta, inſtructa, caulina pauca, ſubulata, foliis radicalibus paulo latiora, erecta, ſeſquinam longa.

LEAVES, thoſe next the root numerous, growing in bundles, glaucous, ſomewhat rigid, briſtle-ſhaped, roundiſh, grooved on one ſide, at their baſe incloſed in ſheaths, furniſhed with a white erect membrane, thoſe of the ſtalk few, ſubulate, a little broader than the radical leaves, upright, an inch and a half in length.

CULMI plures, ſpithamæi, pedales et ultra, ſuberecti, trinodes, ſcabriuſculi, præſertim ſuperne.

STEMS ſeveral, from a ſpan to a foot or more in length, nearly upright, having uſually three knots, roughiſh, eſpecially on the upper part.

PANICULA bi-triuncialis, ſubcoarctata, tandem ſpiciformis.

PANICLE two or three inches long, ſomewhat cloſed, finally ſpike-like.

CALYX: GLUMA bivalvis, valvis lanceolatis, acuminatis, ſubæqualibus, carina ad lentem ſcabriuſcula, purpuraſcentibus, *fig.* 1.

CALYX: a GLUME of two valves, the valves lanceolate, long-pointed, nearly equal, the keel rough when magnified, purpliſh, *fig.* 1.

COROLLA bivalvis, glumis calycinis brevior, valvula exteriore majore, longitudine fere calycis, nervoſa, nervis duobus plerumque longioribus, hinc apice bifida, *fig.* 2; ariſtata, ariſta e baſi valvulæ, et ejuſdem fere longitudinis, primo recta, *fig.* 3; demum geniculata, valvula interior, minima, *fig.* 4; planiuſcula, diaphana, vix germine longior, baſi utrinque faſciculo minimo pilorum inſtructa, *fig.* 5.

COROLLA of two valves, ſhorter than the glumes of the calyx, the outer valve largeſt, nearly the length of the calyx, ribbed, two of the ribs uſually longer than the reſt, which gives to the tip a bifid appearance, *fig.* 2; awned, awn ſpringing from near the baſe of the valve, and nearly of the ſame length, at firſt ſtraight, *fig.* 3; finally jointed, the inner valve very minute, *fig.* 4; ſcarcely longer than the germen, furniſhed at its baſe on each ſide with a very minute tuft of hairs, *fig.* 5.

STAMINA: FILAMENTA tria, capillaria; ANTHERÆ bifurcæ, purpureæ, *fig.* 7.

STAMINA: three FILAMENTS, capillary; ANTHERÆ purple, *fig.* 7.

PISTILLUM: GERMEN ovatum; STYLI duo, patentes, ad baſin uſque plumoſi, *fig.* 8.

PISTILLUM: GERMEN ovate; STYLES two, ſpreading, feathery quite to the baſe, *fig.* 8.

NECTARIUM: GLUMULÆ duo, lanceolatæ, acuminatæ, *fig.* 6.

NECTARY: two minute GLUMES, lanceolate, long-pointed, *fig.* 6.

In the ſeveral catalogues of plants publiſhed by me at different periods, I have long ſince given to this very diſtinct ſpecies of Agroſtis the name of *ſetacea*, or *Sheep's feſcue-leaved*, the foliage being much finer than that of any other of our Britiſh ſpecies, and conſiderably reſembling that of the Sheep's Feſcue graſs; regarding this name as more expreſſive than that of *alpina*, which was perhaps previouſly given it by SCOPOLI, I am not inclined to alter it, more eſpecially as GMELIN has alſo an *alpina*, which, if we pay any regard to his figure of reference, is not our plant.

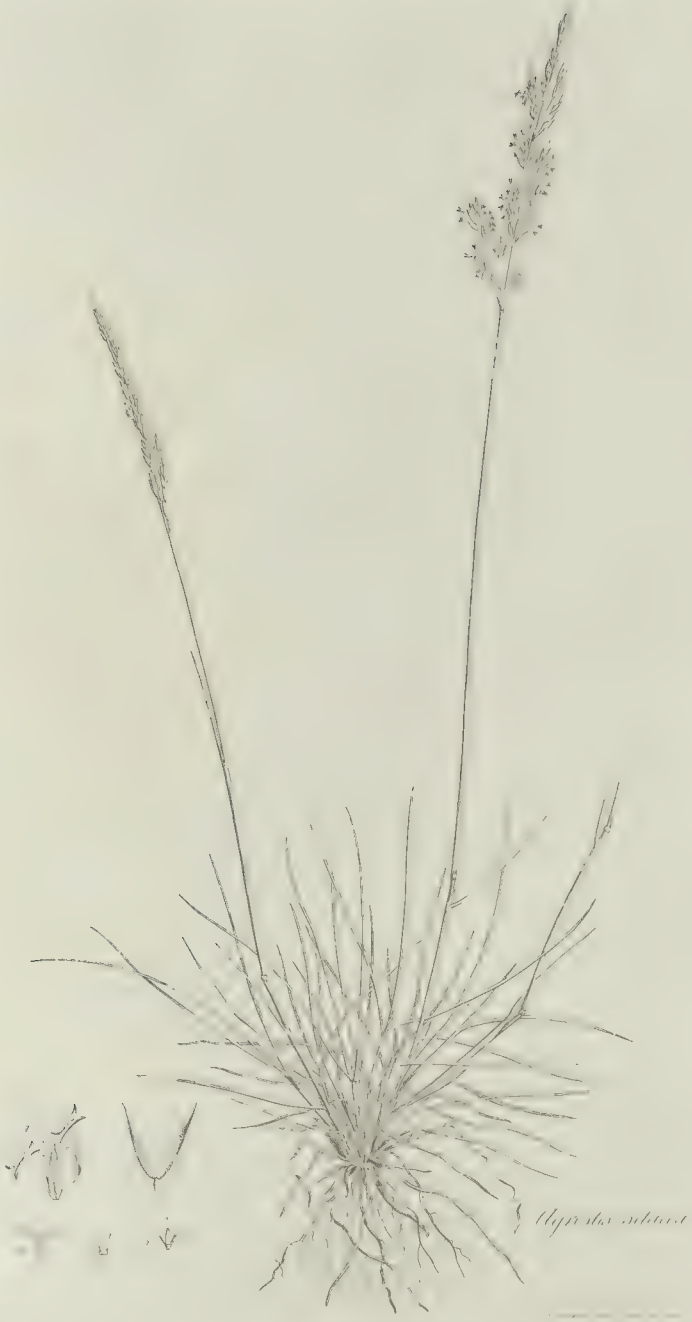
The firſt information I received of this graſs was from my Gardener, ROBERT SQUIBB, who ſent me up ſome tufts of it from Piddletown-Heath, Devonſhire, where his relations lived; I have ſince found it to be one of the moſt common plants of that county, and Cornwall, there being ſcarcely a heath in either on which it does not abound; I have found it alſo plentifully on Bagſhot-Heath, but not in the neighbourhood of London; Lord GAINSBOROUGH obſerved it near Lymington, Hampſhire.

It flowers in July and ripens its ſeeds in Auguſt.

Readily as it grows in its wild ſtate, I have not been able to keep it alive in my garden without planting it in bog earth, and beſtowing unuſual care on it.

The peculiarity of its place of growth, the fineneſs of its glaucous leaves, the cloſeneſs of its panicle, the length of its ariſtæ, ſo cloſely embraced is one of the valves of the calyx as to appear at firſt as if proceeding from it, which we have never obſerved to be wanting, joined to other characters noticed in the deſcription, ſufficiently point it out to the moſt common obſerver.

As an agricultural plant, it does not appear to have much to recommend it; where it abounds, it muſt conſtitute much of the ſheep feed.



Lobelia urens.

LOBELIA URENS. ACRID LOBELIA.

LOBELIA. *Linn. Gen. Pl.* SYNGENESIA MONOGAMIA.

Cal. 5-fidus. *Corolla* 1-petala, irregularis. *Capſ.* infera, 2-ſ. 3-locularis.

LOBELIA *urens* caule erectiuſculo foliis inferioribus ſubrotundis crenatis, ſuperioribus lanceolatis ſerratis, floribus racemoſis. *Linn. Sp. Pl. ed.* 3. *p.* 1321. *Mant. p.* 482.

LOBELIA caule erecto, foliis lanceolatis ſubdentatis, ſpica laxa longa terminali. *Loeſl. it.* 167.

LOBELIA foliis oblongo-ovatis, floribus laxe ſpicatis. *Guett. Stamp.* 1. *p.* 35. *Dalib. Pariſ.* 268.

RAPUNCULUS galeatus bleſenſis ſ. ſolonienſis flore violaceo minore. *Moriſ. Hiſt.* 2. *p.* 407. *ſ.* 5. *t.* 5. *f.* 56.

RAPUNTIUM urens ſolonienſe. *Moriſ. bleſſ.* 300. *Bocc. fic.* 20. *t.* 11. *var.* 11. 3. *Raii Hiſt.* 746. *Monnier Obſ.* 131.

DRABA flore cæruleo galeato. *Bauh. Prodr.* 53. *Pin.* 110.

Planta, lacteſcens, lævis, acris.

The plant milky, ſmooth, and acrid.

RADIX perennis, fibroſa.

ROOT perennial, fibrous.

CAULIS pedalis ad bipedalem, erectus, ramoſus, anguloſus.

STALK from one to two feet high, upright, branched, angular.

RAMI adſcendentes, tetragoni.

BRANCHES aſcending, four-cornered.

FOLIA alterna, ſeſſilia, ſubdecurrentia, inferiora oblonga, obtuſa, baſi anguſtata, varie dentata, apice ſæpe trifida, ſuperiora lanceolata, denticulata.

LEAVES alternate, ſeſſile, ſomewhat decurrent, the lowermoſt oblong, obtuſe, narrowed at the baſe, varioufly indented, often trifid at the point, the uppermoſt lanceolate, finely toothed.

FLORIS violacei, inodori, numeroſi, ſecundi, racemoſi.

FLOWER violet-coloured, ſcentleſs, numerous, growing to one ſide in racemi.

RACEMI ſemipedales, erecti, bracteati.

RACEMI about ſix inches in length, upright, furniſhed with bracteæ.

BRACTEÆ inferiores lanceolatæ, denticulatæ, apice tricornes, ſuperioris ſubulatæ, omnibus ad lentem ſcabriuſculis.

BRACTEÆ, the lowermoſt lanceolate, finely toothed, terminating at top in three little horns, the uppermoſt awl-ſhaped, all of them appearing rough if magnified.

FLORES plerumque ſolitarii, pedunculati, pedunculis brevibus, ſtipula ſubulata rubro terminata ad baſin utrinque.

FLOWERS uſually ſingle, on peduncles, peduncles ſhort, furniſhed on each ſide at the baſe with an awl-ſhaped ſtipula tipped with red.

CALYX: PERIANTHIUM ſuperum, perſiſtens, quinquepartitum, laciniis ſubulatis, patentibus, ſuprema cæteris paulo longiore, ad lentem hirſutulis, *fig.* 1.

CALYX: a PERIANTHIUM placed above the germen, continuing, divided into five ſegments which are ſubulate and ſpreading, the uppermoſt a little longer than the others, ſlightly hirſute if magnified, *fig.* 1.

COROLLA monopetala, ad lentem villoſula, tubuloſa, tubus calyce duplo longior, ſuperne longitudinaliter diviſus; *Limbus* quinquepartitus, bilabiatus; labium inferius tripartitum, laciniis ovato-lanceolatis, acuminatis, dependens, tuberculis duobus albis in fauce notatis, ſuperius bipartitum, laciniis anguſtioribus, erectis, remotis, paululum recurvis, *fig.* 2.

COROLLA: monopetalous, ſlightly villous if magnified, tubular, tube twice the length of the calyx, longitudinally divided above; *Limb* deeply divided into five ſegments, two-lipped; under lip tripartite, ſegments ovato-lanceolate, long-pointed, and depending, at the entrance of the throat marked with two white tubercles, upper lip bipartite, ſegments narrower, upright, remote from each other, and ſomewhat bent back, *fig.* 2.

STAMINA: FILAMENTA quinque, alba, ſuperne connata; ANTHERÆ e fuſco-nigricantes, pilis ad margines caneſcentibus, *fig.* 3.

STAMINA: five FILAMENTS, of a white colour, united together above; ANTHERÆ of a browniſh black colour, with grey hairs on their edges, *fig.* 3.

PISTILLUM: GERMEN inferum, ſulcatum; STYLUS filiformis, longitudine ſtaminum, ſuperne paulo craſſior; STIGMA obtuſum, villoſum, *fig.* 4.

PISTILLUM: GERMEN below the calyx, grooved; STYLE filiform, the length of the ſtamina, a little thickened above; STIGMA obtuſe and villous, *fig.* 4.

The Lobelia urens is one of our native plants which it has fallen to the lot of very few Engliſh Botaniſts to ſee, either wild or cultivated, its place of growth being altogether local and confined to a part of the iſland comparatively but little frequented by Botaniſts; in France and Spain it is more common: for more than twenty years we were anxiouſly deſirous of obtaining this plant; once we had the mortification of travelling in a *ſtage coach* cloſe by the ſpot where it was ſaid to grow: our wiſhes were at length gratified by the kindneſs of the Right Hon. Lord WEBB SEYMOUR, who two years ſince ſent us up roots and ſpecimens, accompanied with a letter, which, as it deſcribes minutely its place of growth and other circumſtances, we have taken the liberty to add to our account of this plant.

" *Bradley-Houſe,*

" *Bradley-House, October* 18, 1796.

" S I R,

" Before the arrival of this, you will probably have received a box containing ſome ſpecimens of the Lobelia " urens, which I ſent from Axminſter yeſterday morning by the coach. I was diſappointed in not finding a " ſingle plant in flower, having found it laſt year on the 10th of October in the higheſt perfection; this " difference can only be attributed to the forwardneſs of the laſt ſpring, and the backwardneſs of the preceding " one. It grows in a poor gravelly ſoil, on the ſlope of a heath, called Kilmington-Hill, from the pariſh in " which it is ſituated, and about two miles from Axminſter. It is here confined to a ſpot, not exceeding half " an acre, cloſe to the road, and about fifty yards from the entrance of the heath, on the right-hand ſide in " going from Axminſter to Honiton. I have been thus particular in the deſcription of the place, as I ſearched " for it in ſeveral other parts of the heath (which is extenſive) without finding a ſingle plant. It is ſurrounded " by Ulex europæus, Erica vulgaris, cinerea, and tetralix, Betonica officinalis, and Serratula tinctoria, all in a " dwarf ſtate, and thrives beſt when a few inches of the ſtem are cloſely covered by other plants.

" I remain,

S I R,

" Your obedient humble Servant,

" WEBB SEYMOUR."

The roots ſent, being planted in pots, grew readily, and flowered the enſuing autumn; from the leaſt luxuriant of thoſe our drawing was made: it will be found more branched than the plants uſually are on Kilmington-Hill; but not more ſo, we preſume (if we may judge from figures) than the plant is when found wild in other places.

The name of *urens* has been given to this ſpecies from its hot and burning taſte, not from any ſtinging quality; it certainly is a very acrimonious plant: the leaves ſoon after being chewed, excite conſiderable heat in the mouth, attended ſometimes with ſickneſs: Mr. SYDENHAM EDWARDS, my draughtſman, to whoſe ingenuity I am under great obligations, and who has acquitted himſelf ſo honourably and meritoriouſly towards me, having handled a branch of this plant broken off from the main ſtem, and afterwards rubbed his eyes ſlightly, had a violent pain and temporary inflammation excited in them thereby; which however ſoon went off, on waſhing them with cold water.

As a rare plant, and indeed as an ornamental one, this ſpecies is deſerving of culture; it may be raiſed without any great difficulty from ſeeds, or increaſed by parting its roots, which are perennial, not biennial or annual, as authors have made them.

INDEX,

IN WHICH

The Plants of the fourth, fifth, and fixth Faſciculi, or fecond Volume, are arranged according to the Syſtem of LINNÆUS.

	Latin Name.	*Engliſh Name.*	*Claſs and Order.*
1	HIPPURIS vulgaris	Mares-tail	MONANDRIA *Monogynia.*
2	Salvia verbenaca	Wild Clary or Sage	DIANDRIA *Monogynia.*
3	Liguſtrum vulgare	Privet or Prim	
4	Veronica triphyllos	Speedwell trifid	
5	Veronica ſcutellata	Speedwell bog	
6	Veronica Anagallis	Speedwell water	
7	Veronica montana	Speedwell mountain	
8	Valeriana officinalis	Valerian wild	TRIANDRIA *Monogynia.*
9	Valeriana dioica	Valerian marſh	
10	Valeriana Locuſta	Corn-ſalad	
11	Scirpus maritimus	Club-ruſh round-rooted	
12	Eriophorum polyſtachion	Cotton-graſs many-headed	
13	Eriophorum vaginatum	Cotton-graſs ſingle-headed	
14	Agroſtis fetacea	Bent-graſs Sheep's-feſcue-leav'd	TRIANDRIA *Digynia.*
15	Aira caryophyllea	Hair-graſs ſilver	
16	Alopecurus geniculatus	Foxtail-graſs jointed or flote	
17	Alopecurus pratenſis	Foxtail-graſs meadow	
18	Bromus diandrus	Brome-graſs diandrous	
19	Bromus giganteus	Brome-graſs tall	
20	Feſtuca elatior	Feſcue-graſs tall	
21	Feſtuca pratenſis	Feſcue-graſs meadow	
22	Feſtuca loliacea	Feſcue-graſs darnel	
23	Hordeum murinum	Barley-graſs wall	
24	Melica cærulea	Melic-graſs blue	
25	Melica uniflora	Melic-graſs ſingle-flower'd	
26	Melica nutans	Melic-graſs mountain	
27	Milium effuſum	Millet graſs wood	
28	Panicum Crus-galli	Panic-graſs looſe	
29	Panicum ſanguinale	Panic-graſs cock's-foot	
30	Panicum viride	Panic-graſs green	
31	Panicum verticillatum	Panic-graſs rough	
32	Poa retroflexa	Meadow-graſs reflexed	
33	Poa procumbens	Meadow-graſs procumbent	
34	Poa aquatica	Meadow-graſs water or reed	
35	Aſperula odorata	Woodruff ſweet-ſcented	TETRANDRIA *Monogynia.*
36	Galium verum	Bedſtraw yellow	
37	Plantago media	Plantain hoary	
38	Scabioſa arvenſis	Scabious field	
39	Sherardia arvenſis	Sherardia field	
40	Sagina apetala	Pearl-wort annual	TETRANDRIA *Tetragynia.*
41	Potamogeton criſpum	Pond-weed curled	
42	Lycopſis arvenſis	Bugloſs field	PENTANDRIA *Monogynia.*
43	Lyſimachia nemorum	Moneywort wood	
44	Lyſimachia vulgaris	Looſe-ſtrife yellow	
45	Vinca major	Periwinkle great	
46	Cynogloſſum officinale	Hounds-tongue common	
47	Samolus Valerandi	Water-pimpernel round-leav'd	
48	Campanula rotundifolia	Bell-flower heath or round-leav'd	
49	Symphytum officinale	Comfrey common	
50	Menyanthes trifoliata	Buck-bean	
51	Primula acaulis	Primroſe	
52	Primula officinalis	Cowſlip	
53	Primula farinoſa	Bird's-eye	
54	Pulmonaria maritima	Lungwort ſea	
55	Datura Stramonium	Thorn-apple	
56	Atropa Belladonna	Dwale or deadly Nightſhade	
57	Chironia Centaurium	Centaury	

	Latin Name.	*Engliſh Name.*	*Claſs and Order.*
58	Chærophyllum ſylveſtre	Cow-parſley common	PENTANDRIA *Digynia.*
59	Chærophyllum temulum	Cow-parſley ſmall	
60	Bunium Bulbocaſtanum	Earth or pig-nut	
61	Scandix Peſten	Shepherd's-Needle	
62	Caucalis Anthriſcus	Caucalis hedge	
63	Caucalis infeſta	Caucalis corn	
64	Hydrocotyle vulgaris	Penny-wort marſh or White-rot	
65	Chenopodium rubrum	Gooſe-foot ſmall ſeeded	
66	Chenopodium murale	Gooſe-foot nettle-leaved	
67	Chenopodium hybridum	Gooſe-foot thorn-apple-leav'd	
68	Chenopodium olidum	Blite or Orach ſtinking	
69	Linum uſitatiſſimum	Flax common	PENTANDRIA *Pentagynia.*
70	Myoſurus minimus	Mouſe-tail	PENTANDRIA *Polygynia.*
71	Scilla autumnalis	Squill autumnal	HEXANDRIA *Monogynia.*
72	Leucojum æſtivum	Snow-flake ſummer	
73	Juncus ſylvaticus	Ruſh great hairy wood	
74	Juncus piloſus	Ruſh ſmall hairy wood	
75	Peplis Portula	Water-Purſlane	
76	Convallaria majalis	Lily of the Valley	
77	Rumex Acetoſella	Sorrel ſheeps	HEXANDRIA *Trigynia.*
78	Aliſma Plantago	Water-plantain great	HEXANDRIA *Polygynia.*
79	Aliſma Damaſonium	Water-plantain ſtarry-headed	
80	Erica vulgaris	Heath common	OCTANDRIA *Monogynia.*
81	Polygonum amphibium	Perſicaria amphibious	OCTANDRIA *Trigynia.*
82	Polygonum convolvulus	Buck-wheat climbing	
83	Saxifraga oppoſitifolia	Saxifrage purple	DECANDRIA *Digynia.*
84	Saxifraga hirculus	Saxifrage marſh	
85	Silene anglica	Catchfly Engliſh	DECANDRIA *Trigynia.*
86	Arenaria trinervia	Chickweed plantain-leav'd	
87	Arenaria ſerpyllifolia	Chickweed thyme-leav'd	
88	Stellaria uliginoſa	Stichwort bog	
89	Spergula ſaginoides	Spurrey pearlwort	DECANDRIA *Pentagynia.*
90	Spergula nodoſa	Spurrey knotted	
91	Spergula arvenſis	Spurrey corn	
92	Ceraſtium pumilum	Mouſe-ear-Chickweed dwarf	
93	Ceraſtium tetrandrum	Mouſe-ear-Chickweed tetrandrous	
94	Ceraſtium arvenſe	Mouſe-ear-Chickweed corn	
95	Sedum ſexangulare	Stonecrop inſipid	
96	Agrimonia Eupatoria	Agrimony	DODECANDRIA *Digynia.*
97	Euphorbia exigua	Spurge ſmall	DODECANDRIA *Trigynia.*
98	Spiræa Ulmaria	Meadow-ſweet	ICOSANDRIA *Pentagynia.*
99	Tormentilla officinalis	Tormentil officinal	ICOSANDRIA *Polygynia.*
100	Roſa canina	Roſe dog	
101	Glaucium corniculatum	Horned-Poppy red	POLYANDRIA *Monogynia.*
102	Ciſtus guttatus	Ciſtus ſpotted-flower'd	
103	Ciſtus Helianthemum	Ciſtus dwarf	
104	Papaver dubium	Poppy long ſmooth-headed	
105	Papaver Argemone	Poppy long prickly-headed	
106	Clematis Viralba	Travellers-joy	POLYANDRIA *Polygynia.*
107	Ranunculus Flammula	Spearwort ſmall	
108	Ranunculus arvenſis	Crowfoot corn	
109	Ranunculus repens	Crowfoot creeping	
110	Ranunculus hederaceus	Crowfoot ivy-leav'd	
111	Anemone apennina	Anemone mountain	
112	Helleborus viridis	Hellebore green	
113	Meliſſa Nepeta	Calamint field	DIDYNAMIA *Gymnoſpermia.*
114	Melittis Melliſſophyllum	Baſtard-Balm	
115	Galeopſis verſicolor	Galeopſis parti-coloured	
116	Stachys arvenſis	Stachys corn	
117	Galeobdolon Galeopſis	Archangel yellow	
118	Prunella vulgaris	Self-heal	
119	Origanum vulgare	Marjoram wild	
120	Teucrium Scorodonia	Germander ſage-leav'd	
121	Scutellaria minor	Hooded-willow-herb ſmall	

	Latin Name.	*Englifh Name.*	*Claſs and Order.*
122	Euphraſia officinalis	Eyebright common	DIDYNAMIA *Angioſpermia.*
123	Rhinanthus Crifta galli	Yellow rattle or Cock's comb	
124	Scrophularia aquatica	Figwort water	
125	Antirrhinum Peloria	Peloria	
126	Antirrhinum minus	Toad-flax leaſt	
127	Antirrhinum Orontium	Snapdragon ſmall	
128	Orobanche major	Broom-rape common	
129	Sinapis arvenſis	Charlock	TETRADYNAMIA *Siliquoſa.*
130	Sinapis alba	Muſtard white	
131	Raphanus Raphaniſtrum	Radiſh wild	
132	Cardamine hirſuta	Ladies-ſmock hairy	
133	Turritis glabra	Tower-muſtard ſmooth	
134	Siſymbrium terreſtre	Water-radiſh annual	
135	Siſymbrium Irio	Rocket London	
136	Siſymbrium Naſturtium	Water creſs	
137	Eryſimum officinale	Hedge-muſtard	
138	Thlaſpi campeſtre	Mithridate-muſtard	TETRADYNAMIA *Siliculoſa.*
139	Thlaſpi arvenſe	Penny-creſs	
140	Iberis nudicaulis	Rock-creſs	
141	Geranium parviflorum	Crane's-bill ſmall-flowered	MONADELPHIA *Decandria.*
142	Geranium diſſectum	Crane's-bill jagged	
143	Geranium pratenſe	Crane's-bill Crowfoot	
144	Malva moſchata	Mallow muſk	MONADELPHIA *Polyandria.*
145	Fumaria capreolata	Fumitory ramping	DIADELPHIA *Hexandria.*
146	Vicia Cracca	Vetch tufted	DIADELPHIA *Decandria.*
147	Lathyrus Aphaca	Vetchling yellow	
148	Lathyrus Niſſolia	Vetch crimſon graſs	
149	Lathyrus ſylveſtris	Vetchling narrow-leaved	
150	Spartium ſcoparium	Broom common	
151	Ornithopus perpuſillus	Bird's-foot common	
152	Trifolium ſcabrum	Trefoil rough	
153	Trifolium arvenſe	Trefoil hare's-foot	
154	Trifolium ochroleucum	Clover yellow	
155	Trifolium glomeratum	Trefoil round-headed	
156	Trifolium procumbens	Trefoil procumbent	
157	Hypericum quadrangulum	St. John's-wort ſquare-ſtalked	POLYADELPHIA *Polyandria.*
158	Hieracium Piloſella	Mouſe-ear	SYNGENESIA *Polygamia Æqualis.*
159	Hieracium umbellatum	Hawk-weed buſhy	
160	Leontodon hirtum	Dandelion deficient	
161	Leontodon hiſpidum	Dandelion rough	
162	Crepis tectorum	Succory-Hawkweed ſmooth	
163	Sonchus arvenſis	Sow-thiſtle corn	
164	Sonchus paluſtris	Sow-thiſtle marſh	
165	Cichorium Intybus	Succory blue	
166	Prenanthes muralis	Wild-lettuce ivy-leaved	
167	Bidens tripartita	Hemp-agrimony trifid	
168	Carduus tenuiflorus	Thiſtle ſlender-flowered	
169	Carduus polyacanthos	Thiſtle pricklieſt	
170	Carduus paluſtris	Thiſtle marſh	
171	Carduus arvenſis	Thiſtle curſed	
172	Onopordum Acanthium	Cotton-thiſtle	
173	Arctium Lappa	Burdock	
174	Chryſanthemum Leucanthemum	Ox-eye daiſy	SYNGENESIA *Polygamia Superflua.*
175	Chryſanthemum ſegetum	Corn-marigold	
176	Achillea Ptarmica	Sneeze-wort	
177	Achillea Millefolium	Yarrow	
178	Senecio erucæfolius	Ragwort hoary	
179	Anthemis Cotula	May-weed ſtinking	
180	Matricaria Chamomilla	Camomile corn	
181	Centaurea Cyanus	Blue-bottle corn	SYNGENESIA *Polygamia Fruſtranea.*
182	Jaſione montana	Sheeps-ſcabious hairy	SYNGENESIA *Monogamia.*
183	Lobelia urens	Lobelia acrid	
184	Orchis latifolia	Orchis marſh	GYNANDRIA *Diandria.*
185	Orchis fuſca	Orchis great	
186	Orchis bifolia	Orchis butterfly	
187	Ophrys ſpiralis	Ladies-traces	
188	Ophrys fucifera	Ophrys green-winged	
189	Ophrys anthropophora	Ophrys man	

	Latin Name.	*Engliſh Name.*	*Claſs and Order.*
190	Carex riparia	Carex great	Monoecia *Triandria.*
191	Carex acuta	Carex acute	
192	Carex gracilis	Carex ſlender-ſpiked	
193	Carex ventricoſa	Carex turgid	
194	Sparganium ramoſum	Burr-reed great	
195	Sparganium ſimplex	Burr-reed ſmall	
196	Urtica dioica	Nettle common or great	
197	Urtica urens	Nettle ſmall	
198	Salix monandra	Willow bitter	Dioecia *Diandria.*
199	Salix triandra	Willow triandrous	
200	Mercurialis annua	Mercury annual	Dioecia *Enneandria.*
201	Holcus lanatus	Soft-graſs meadow	Polygamia *Monoecia.*
202	Holcus mollis	Soft-graſs creeping-rooted	
203	Parietaria officinalis	Pellitory of the wall	
204	Equiſetum arvenſe	Horſe-tail corn	Cryptogamia *Filices.*
205	Bryum barbatum	Bryum bearded	Cryptogamia *Muſci.*
206	Phaſcum acaulon	Phaſcum common	
207	Phaſcum ſubulatum	Phaſcum heath	
208	Jungermannia complanata	Jungermannia flat	Cryptogamia *Algæ.*
209	Agaricus aurantius	Muſhroom orange	Cryptogamia *Fungi.*
210	Agaricus æruginoſus	Muſhroom verdigris	
211	Agaricus floccoſus	Muſhroom ſhaggy	
212	Agaricus procerus	Muſhroom tall	
213	Agaricus velutipes	Muſhroom velvet-ſtalked	
214	Agaricus carnoſus	Muſhroom fleſhy	
215	Agaricus verrucoſus	Muſhroom warty	
216	Boletus lucidus	Boletus lacquer'd	
217	Phallus caninus	Morell red-headed	

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In which the Latin Names of the Plants in the Fourth, Fifth, and Sixth Fasciculi are arranged Alphabetically.

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	Latin Name.	*Claſs and Ord.*
1	Salvia verbenaca	DIANDRIA *Monogynia.*
2	Veronica triphyllos	
3	Valeriana officinalis	TRIANDRIA *Monogynia.*
4	Melica nutans	TRIANDRIA *Digynia.*
5	Bromus diandrus	
6	Aira caryophyllea	
7	Feſtuca pratenſis	
8	Feſtuca elatior	
9	Feſtuca loliacea	
10	Poa retroflexa	
11	Poa procumbens	
12	Agroſtis fetacea	
13	Galium verum	TETRANDRIA *Monogynia.*
14	Primula farinoſa	PENTANDRIA *Monogynia.*
15	Primula officinalis	
16	Primula acaulis	
17	Datura Stramonium	
18	Pulmonaria maritima	
19	Hydrocotyle vulgaris	PENTANDRIA *Digynia.*
20	Chenopodium murale	
21	Chenopodium rubrum	
22	Caucalis Anthriſcus	
23	Caucalis infeſta	
24	Chærophyllum temulum	
25	Scilla autumnalis	HEXANDRIA *Monogynia.*
26	Saxifraga Hirculus	DECANDRIA *Digynia.*
27	Saxifraga oppoſitifolia	
28	Stellaria uliginoſa	DECANDRIA *Trigynia.*
29	Ceraſtium arvenſe	DECANDRIA *Pentagynia.*
30	Ceraſtium pumilum	
31	Ceraſtium tetrandrum	
32	Glaucium corniculatum	POLYANDRIA *Monogynia.*
33	Ciſtus guttatus	
34	Helleborus viridis	POLYANDRIA *Polygynia.*
35	Anemone apennina	
36	Ranunculus arvenſis	
37	Ranunculus Flammula	
38	Galeopſis verſicolor	DIDYNAMIA *Gymnoſpermia.*
39	Melittis Meliſſophyllum	
40	Meliſſa Nepeta	DIDYNAMIA *Angioſpermia.*
41	Antirrhinum Peloria	TETRADYNAMIA *Siliculoſa.*
42	Iberis nudicaulis	
43	Thlaſpi arvenſe	TETRADYNAMIA *Siliquoſa.*
44	Siſymbrium Naſturtium	
45	Geranium diſſectum	MONADELPHIA *Decandria.*
46	Geranium parviflorum	
47	Fumaria capreolata	DIADELPHIA *Hexandria.*
48	Trifolium ſcabrum	DIADELPHIA *Decandria.*
49	Trifolium ochroleucum	
50	Trifolium arvenſe	
51	Lathyrus Niſſolia	
52	Lathyrus Sylveſtris	
53	Ornithopus perpuſillus	
54	Carduus polyacanthos	SYNGENESIA *Polygamia Æqualis.*
55	Carduus tenuiflorus	
56	Carduus paluſtris	
57	Carduus arvenſis	
58	Hieracium umbellatum	
59	Leontodon hirtum	
60	Chryſanthemum ſegetum	SYNGENESIA *Polygamia Superflua.*
61	Achillea Millefolium	SYNGENESIA *Polygamia Fruſtranea.*
62	Centaurea Cyanus	SYNGENESIA *Monogamia.*
63	Lobelia urens	
64	Orchis fuſca	GYNANDRIA *Digynia.*
65	Orchis bifolia	
66	Ophrys anthropophora	
67	Ophrys fuciflora	
68	Carex ventricoſa	MONOECIA *Triandria.*
69	Urtica dioica	MONOECIA *Tetrandria.*
70	Urtica urens	
71	Salix monandra	DIOECIA *Diandria.*
72	Salix triandra	

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Carduus tenuiflorus	55
Carduus paluſtris	56
Carduus arvenſis	57
Carex ventricoſa	68
Caucalis Anthriſcus	22
Caucalis infeſta	23
Centaurea Cyanus	62
Ceraſtium arvenſe	29
Ceraſtium pumilum	30
Ceraſtium tetrandrum	31
Chenopodium murale	20
Chenopodium rubrum	21
Chærophyllum temulum	24
Chryſanthemum ſegetum	60
Ciſtus guttatus	33
Datura Stramonium	17
Feſtuca pratenſis	7
Feſtuca elatior	8
Feſtuca loliacea	9
Fumaria capreolata	47
Galeopſis verſicolor	38
Galium verum	13
Geranium diſſectum	45
Geranium parviflorum	46
Glaucium corniculatum	32
Helleborus viridis	34
Hieracium umbellatum	58
Hydrocotyle vulgaris	19
Iberis nudicaulis	42
Lathyrus ſylveſtris	52
Lathyrus Niſſolia	51
Leontodon hirtum	59
Lobelia urens	63
Melica nutans	4
Melitis Nepeta	40
Melittis Melliſphyllum	39
Ophrys anthropophora	66
Ophrys fuciflora	67
Orchis fuſca	64
Orchis bifolia	65
Ornithopus perpuſillus	53
Poa retroflexa	10
Poa procumbens	11
Primula farinoſa	14
Primula officinalis	15
Primula acaulis	16
Pulmonaria maritima	18
Ranunculus arvenſis	36
Ranunculus Flammula	37
Salix monandra	71
Salix triandra	72
Salvia verbenaca	1
Saxifraga Hirculus	26
Saxifraga oppoſitifolia	27
Scilla autumnalis	25
Siſymbrium Naſturtium	44
Stellaria uliginoſa	28
Thlaſpi arvenſe	43
Trifolium ſcabrum	48
Trifolium arvenſe	50
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Bird's-eye	14
Bird's-foot common	53
Blue-bottle corn	62
Brome-graſs diandrous	5
Calamint field	40
Carex turgid	68
Caucalis hedge	22
Caucalis corn	23
Ciſtus ſpotted-flowered	33
Clover yellow	49
Corn-marygold	60
Cow-parſley ſmall	24
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Galeopſis particoloured	38
Gooſefoot nettle-leaved	20
Gooſefoot ſmall-feeded	21
Hair-graſs ſilver	6
Hawkweed bufhy	58
Hellebore green	34
Horned-Poppy red	32
Lathyrus crimſon	51
Lobelia acrid	63
Lung-wort ſea	18
Melic-graſs mountain	4
Meadow-graſs reflexed	10
Meadow-graſs procumbent	11
Mouſe-Ear Chickweed corn	29
Mouſe-Ear Chickweed dwarf	30
Mouſe-Ear Chickweed tetrandrous	31
Nettle great	69
Nettle ſmall	70
Ophrys man	66
Ophrys green-winged	67
Orchis great	64
Orchis butterfly	65
Peloria	41
Penny-creſs	43
Penny-wort marſh	19
Primroſe	16
Rock-creſs	42
Sage or Clary wild	1
Saxifrage marſh	26
Saxifrage purple	27
Spearwort ſmall	37
Speedwell trifid	37
Squill autumnal	2
Stichwort bog	25
Thiſtle pricklieſt	28
Thiſtle ſlender-flowered	54
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